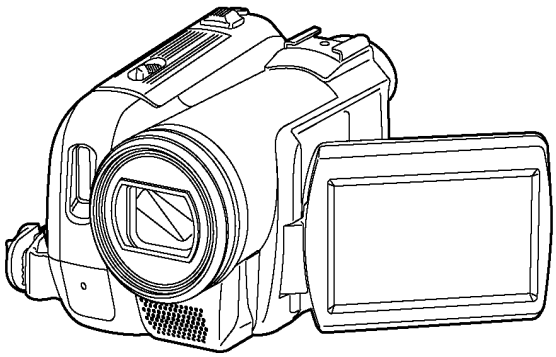
ORDER NO.VM0512045CE

Service Manual

Digital Video Camera/Recorder



NV-GS300EG
NV-GS300E
NV-GS300EB
NV-GS300EP
NV-GS300EE
NV-GS300GC
NV-GS300GN
NV-GS300SG
NV-GS300GCT
NV-GS300PL
NV-GS300GD
NV-GS300GT
NV-GS280EG
NV-GS280E
NV-GS280EB
NV-GS280EP
NV-GS308GK

VOL.1

A-MECHANISM
Colour
(S).....Silver Type

Panasonic

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1 Safety Precaution

1.1. General Guidelines

1. IMPORTANT SAFETY NOTICE
   There are special components used in this equipment which are important for safety. These parts are marked by (!) in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock fire, or other hazards. Do not modify the original design without permission of manufacturer.
2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
3. When servicing, observe the original lead dress. It a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage current cold check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

1.1.2. Leakage current hot check (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect "A" to exposed metallic part on the set. And connect "B" to a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with 1 kΩ/V or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 V RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

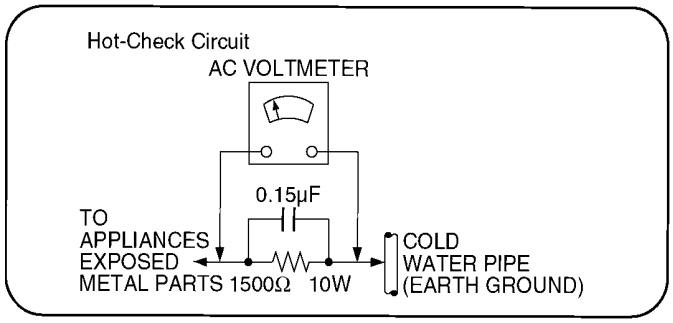

Figure 1

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2 Warning

2.1. Caution for AC Cord (VJA0940 type)

2.1.1. Information for your safety

IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY

DO NOT REMOVE THE OUTER COVER

To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.1.2. Caution for AC mains lead

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362
Check for the ASRA mark or the BSI mark on the body of the fuse.

ASTA mark	BSI mark

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safety.
There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

2.1.2.1. Important

The wires in this mains lead are coloured in accordance with the following code:

Blue	Neutral
Brown	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

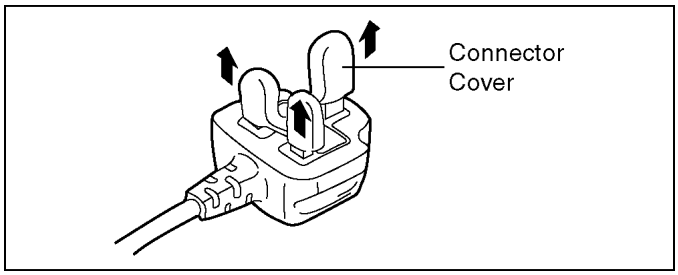
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.

Earth Symbol	⏚

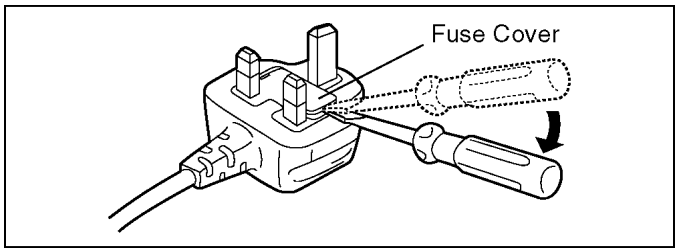
2.1.2.2. Before use

remove the Connector Cover as follows.

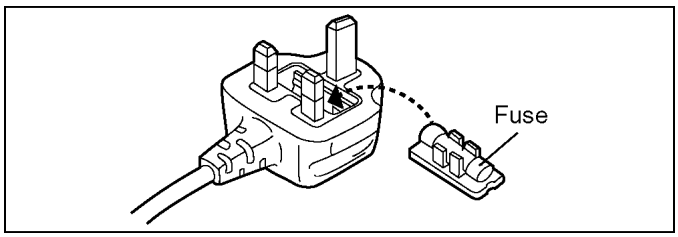


2.1.2.3. How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



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2.2. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as “antistatic (ESD protected)” can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION:
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2.3. Handling the Lead-free Solder

2.3.1. About lead free solder (PbF)

Distinction of PbF P.C.B.:
PCBs (manufactured) using lead free solder will have a PbF printing on the P.C.B..

CAUTION:
- **Pb free solder has a higher melting point than standard solder;**
  Typically the melting point is 50 °F - 70 °F (30 °C - 40 °C) higher.
  Please use a soldering iron with temperature control and adjust it to 700 °F±20 °F (370 °C± 10 °C).
  In case of using high temperature soldering iron, please be carefull not to heat too long.
- **Pb free solder will tend to splash when heated too high (about 1100 °F/600 °C).**
- **All products with the printed circuit board with PbF stamp or printing must be serviced with lead free solder.**
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

Recommendations
Recommended lead free solder composition is Sn96.5 Ag3.0 Cu0.5.

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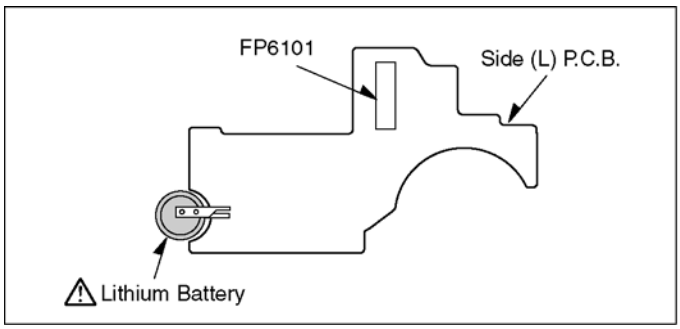
2.4. How to Replace the Lithium Battery (PROCEDURE)

1. Remove the Side (L) P.C.B.. (Refer to Disassembly Procedures.)
2. Unsolder the Lithium Battery “ML-621S/F9D” and then replace the new one. (See Figure B1.)
3. Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.



CAUTION
The battery used in this device may present a risk of fire or chemical burn if mistreated.
Do not recharfe, disassemble, heat above 100°C (212°F), or incinerate.
Replace battery with Panasonic part nmber ML-621S/F9D only.
Use of another battery may present a risk of fire or explosion.
Dispose of used battery promptly.
Keep away from children.
Do not disassemble and do not dispose of in fire.

Fig. B1

Note:

The lithium battery is a critical component. (Type No.: ML-621S/F9D)
It must never be subjected to excessive heat or discharge.
It must therefore only be fitted in equipment designed specifically for its use.
Replacement batteries must be of the same type and manufacture.
They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.
Do not attempt to re-charge the old battery or re-use it for any other purpose.
It should be disposed of in waste products destined for burial rather than incineration.

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

PRECAUTION
Le fait de remplacer incorrectement la pile peut présenter des risques d'explosion.
Remplacer la pile uniquement par une pile identique ou de type équivalent recommandée par le fabricant. Se débarrasser des piles usagées conformément aux instructions du fabricant.

VORSICHT
Bei einer falsch eingesetzten Batterie besteht Explosionsgefahr. Nur mit einer vom Hersteller empfohlenen Batterie vom gleichen Typ ersetzen.
Verbrauchte Batterien beim Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.

VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning má kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

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3 Service Navigation

3.1. Service Information

This service manual contains technical information which will allow service personnel's to understand and service this model.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

Note 1:

These movie camera uses AC Adaptor VSK0644.

Note 2:

1) This service manual does not contain the following information, because of the impossibility of sevicing at component level.
   1. Schematic Diagram, Block Diagram and P.C.B. layout of Main P.C.B./Sub P.C.B.
   2. Parts List for individual parts of Main P.C.B./Sub P.C.B.

2) The following category are recycle module part. Please send them to Central Repair Center.
   *Main P.C.B.
   (VEP03G87B: NV-GS300EG/E/EB/EP, VEP03G87C: NV-GS300EE/GC/GN/SG, VEP03G87D: NV-GS308GK, VEP03G87F: NV-GS300GD, VEP03G87G: NV-GS300GT, VEP03G87H: NV-GS280EG/E/EB/EP, VEP03G87S: NV-GS300PL, VEP03G87T: NV-GS300GCT)
   *Sub P.C.B.
   (VEP23645B: NV-GS300EG/E/EB/EP/EE/GC/GN/SG/GCT, GS280EG/E/EB/EP, GS308GK, VEP23645C: NV-GS300PL/GD/GT)

When a part replacement is required for repairing each Main P.C.B. and/or Sub P.C.B., replace the assembly parts. (Main P.C.B. and/or Sub P.C.B.)
The following circuits are contained in Main P.C.B.

1. Main Connection Circuit
2. AVIO Circuit
3. Video Circuit
4. Power Circuit
5. Control Circuit

The following circuit is contained in Sub P.C.B..

1. Sub Connection Circuit
2. Camera Circuit
3. Lens Drive Circuit

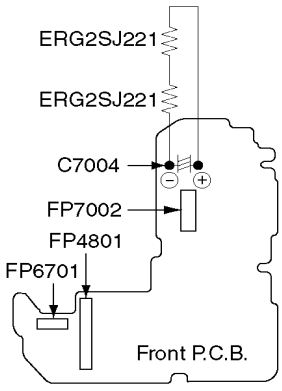
3.2. Service Caution

3.2.1. How to Discharge the Capacitor on the Front P.C.B.

Remove the Front P.C.B.. (Refer to Disassembly Procedures.)

CAUTION
Be sure to discharge the capacitor on Front P.C.B. before disassembling.
CAUTION
Be careful of the high voltage circuit on Front P.C.B. when servicing.

Method:
1.Prepare the 2 Resistors (ERG2SJ221:220 ohm/2w) for discharge.
Note:
Above 2 Resistors may be substituted with equivalent type.
2.Make short circuit using 2 Resistors between C7004(+) and C7004(-) for 3 seconds as follows.
3.After discharging, confirm that the capacitor voltage is sufficiently lowered using a voltmeter



3.2.2. EEPROM data for spare parts of the Main P.C.B.

When the Main P.C.B. is replaced, the fixed and average data must be changed by Tatsujin kit according to the Movie Camera's suffix.
Then, confirm and/or adjust the VTR and Camera section one by one.

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4 Specifications

Digital Video Camera / Recoder

ITEM	SPECIFICATION
POWER	Source: DC 7.9 / 7.2 V Consumption: Recording 3.6 W (When using Viewfinder) 3.9 W (When using LCD Monitor)
RECORDING FORMAT	Mini DV (Consumer-use Digital Video SD Format)
TAPE USED	6.35 mm digital video tape
RECORDING / PLAYBACK TIME	SP mode: 80 min. with DVM80 LP mode: 120 min. with DVM80
CAMERA	Filter Diameter: 37.0 mm
	Zoom: 10:1 Power Zoom
	Monitor: 2.7-inch LCD
	Lens: Auto Iris, F1.8 to F2.8, Focal Length; 3.0 - 30.0 mm Macro (Full Range AF)
	Image Sensor: 1/6-inch 3CCD Image Sensor
	Viewfinder: Colour Electronic Viewfinder
WEB CAMERA	Compression: Motion JPEG
	Image Size: 320 × 240 pixels (QVGA)
	Frame Rate: Approx. 6fps
VIDEO	Recording System: Digital Component
	Television System: CCIR; 625 Lines, 50 Fields PAL Colour Signal (Except NV-GS300PL/GD/GT) EIA Standard: 525 Lines, 60 Fields NTSC Colour Signal (NV-GS300PL/GD/GT)
	Video Output Level: 1.0 Vp-p 75 ohm (AV Multi Jack) S-Video Output Level: Y Output; 1.0 Vp-p 75 ohm (AV Multi Jack) C Output; 0.3 Vp-p 75 ohm (Except NV-GS300PL/GD/GT) C Output; 0.286 Vp-p 75 ohm (NV-GS300PL/GD/GT)
AUDIO	Recording System: PCM Digital Recording 16 bit (48 kHz/2 ch) 12 bit (32 kHz/4 ch)
	Audio Output Level: 316 mV, 600 ohm (AV Multi Jack) Mic Input: Mic sensitivity -50dB(0dB=1V/Pa,1kHz) (Stereo Mini Jack)
CARD MEMORY FUNCTIONS	Recording Media: SD Memory Card Still Picture Recording File Format: JPEG (Design rule for Camera File system, based on Exif 2.2 standard), DPOF corresponding Still Image Size: Mega-pixel Recording; 2048 × 1512 (3.1 million pixels, 4:3 Mode) 2048 × 1112 (2.4 million pixels, 16:9 Mode) 1600 × 1200 (2.0 million pixels, 4:3 Mode) 1280 × 960 (1.0 million pixels, 4:3 Mode) VGA Recording; 640 × 360 (16:9 Mode) 640 × 480 (4:3 Mode)

ITEM	SPECIFICATION
STANDARD ILLUMINATION	1,400 lx
MINIMUM REQUIRED ILLUMINATION	1 lx (Colour Night View Mode)
USB	Card reader/writer function, USB 2.0 compliant (Hi-Speed) No copyright protection support Pict Bridge-Compliant
DIGITAL INTERFACE	DV Output Terminal (IEEE1394, 4-pin) (NV-GS280 Series) DV Input/Output Terminal (IEEE1394, 4-pin) (NV-GS300 Series, GS308GK)
VIDEO FLASH	GN 4.8
MICROPHONE	Stereo (with a zoom function)
SPEAKER	1 round speaker ϕ20 mm
OPERATING TEMPERATURE	0 ˚C - 40 ˚C
OPERATING HUMIDITY	10 % - 80 %
WEIGHT	Approx. 420 g (without supplide Battery and DV cassette) Approx. 500 g (with supplide Battery and DV cassette)
DIMENSIONS	Approx. 71 (W) × 73 (H) × 123 (D) mm (excluding the projection parts)
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack Unit 1 pc. DC Cable 1 pc. AC Cord (Except NV-GS300GC/SG) 2 pcs. AC Cord (NV-GS300GC/SG) 1 pc. AV Multi Cable 1 pc. Remote Controller 1 pc. Bottom-type Battery 1 pc. Head Cleaner (NV-GS300EE/GC/GN/SG, GS308GK) 1 pc. Shoulder Belt 1 pc. Remote Control Unit (NV-GS300EE/GC/GN/SG/GD/GT/GCT,GS308GK
SOLDER	This model use lead free solder (PbF).

Weight and dimensions are approximate values.
Specifications may change without prior notice.

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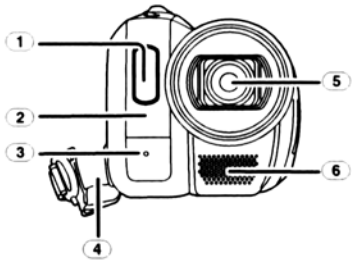
5 Location of Controls and Components

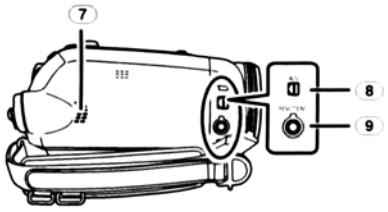
Followings are the Location of Controls and Components for NV-GS300EP, NV-GS280EP as a sample.
For other models, refer to each Operatin Instructions.

Parts identification and handling

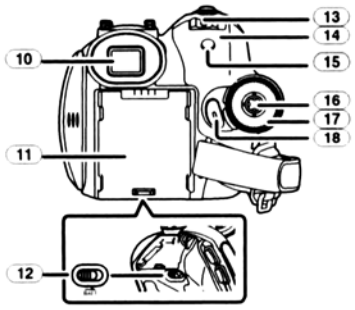
■ Camera



1. **Built-in video flash**
2. **White balance sensor**
   Remote control sensor
3. **Recording lamp**
4. **Grip belt**
   (One-touch free style grip belt)
5. **Lens (LEICA DICOMAR)**
6. **Microphone (built-in, stereo)**



7. **Speaker**
8. **Audio-video/S-Video output terminal [A/V]**
   - Use the supplied Multi cable only, otherwise audio may not be played back normally.
9. **Microphone terminal [MIC]**
   - A compatible plug-in powered microphone can be used as an external microphone.
   - When the movie camera is connected with AC Adaptor, sometimes noise may be heard depending on microphone type. In that case, please switch to battery for power supply and noise will stop.



10. **Viewfinder**

Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the Viewfinder screen. However, this is not a malfunction and does not affect the recorded picture.

11. **Battery holder**
12. **Battery release lever [BATT]**
13. **Power switch [OFF/ON]**
14. **Status lamp**
15. **Menu button [MENU]**
16. **Joystick**
17. **Mode dial**
18. **Recording start/stop button**

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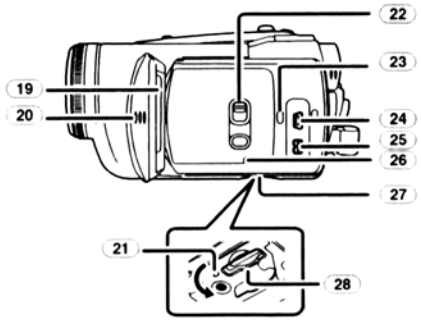
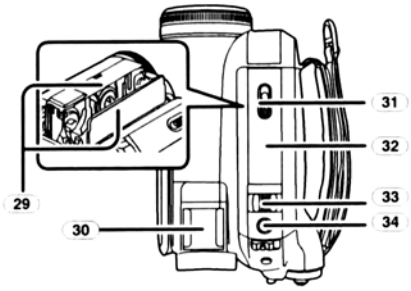


19 LCD monitor

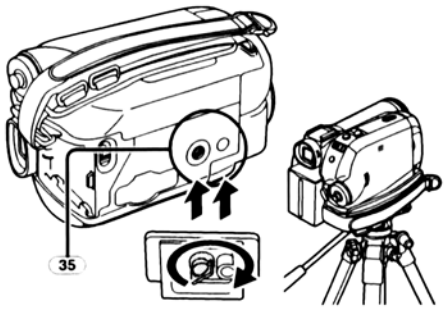
Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD monitor screen. However, this is not a malfunction and does not affect the recorded picture.

20 LCD monitor open part [OPEN]
21 Card access lamp
22 Mode select switch [AUTO/MANUAL/ FOCUS]
23 Power LCD button [POWER LCD]
24 USB terminal [ψ]
25 (NV-GS300)
DV input/output terminal [DV]
(NV-GS280)
DV output terminal [DV]
26 Reset button [RESET]
27 Card slot
28 Card slot cover

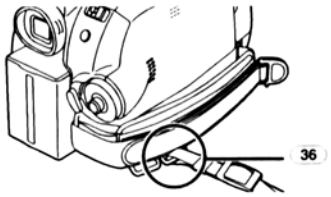


29 Cassette holder
30 Accessory shoe
- Accessories, such as a stereo microphone (VW-VMS2E; optional), are attached here.

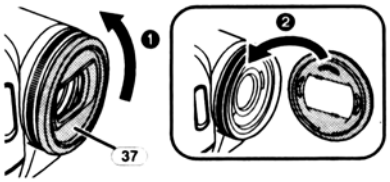
31 Cassette eject lever [OPEN/EJECT]
32 Cassette cover
33 Zoom lever [W/T]
Volume lever [−/VOL+]
34 Photoshot button [PHOTO SHOT]



35 Tripod receptacle
This is a hole for attaching the camera to optional tripod/VW-CT45E. (Please carefully read the operating instructions for how to attach the tripod to the camera.)
- You cannot open the card slot cover when the tripod is used. Insert the card first and then attach the tripod.



36 Shoulder strap fixture



37 Lens hood
In order to remove the lens hood, rotate it counterclockwise ❶. In order to fit it, put into slot ❷, and then rotate it clockwise.

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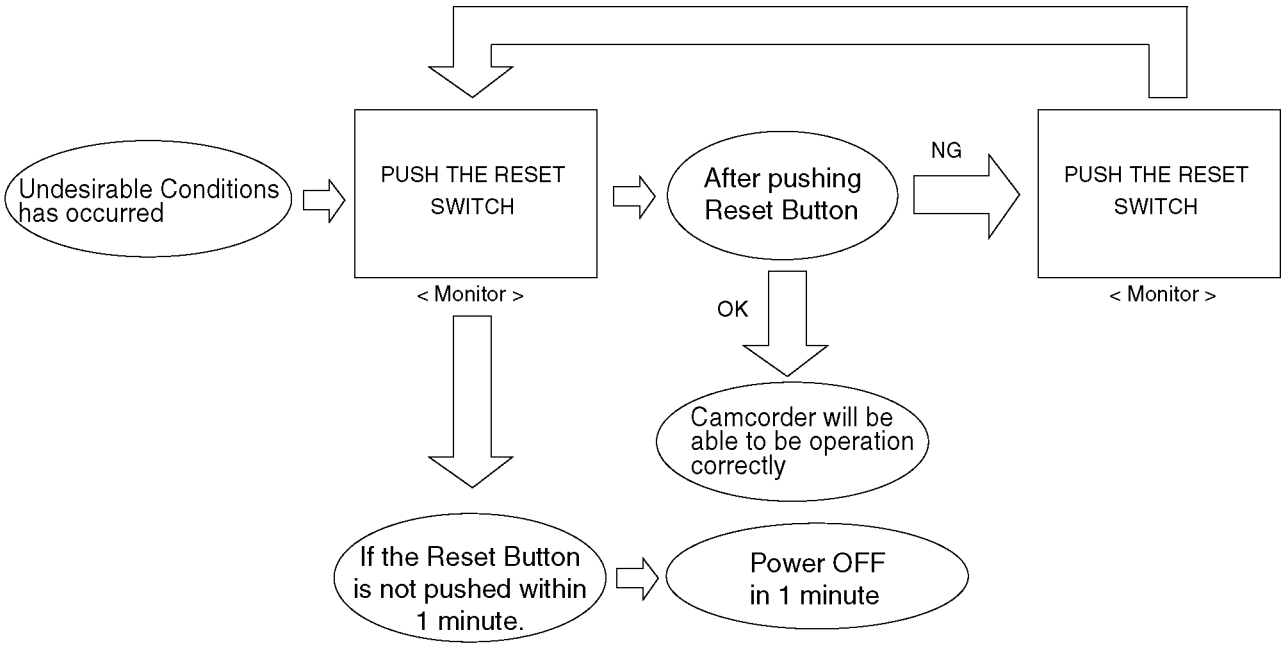
6 Service Mode

6.1. Error Display

“PUSH THE RESET SWITCH” is displayed automatically on the EVF or the LCD Monitor when an undesirable condition has occured.


Undesirable Conditions has occurred
PUSH THE RESET SWITCH
< Monitor >
After pushing Reset Button
NG
PUSH THE RESET SWITCH
< Monitor >
OK
Camcorder will be able to be operation correctly
If the Reset Button is not pushed within 1 minute.
Power OFF in 1 minute

Note:

When "PUSH THE RESET SWITCH" is displayed repeatedly, required.
Check the Error Code which is listed in the Service Menu.

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6.2. Service Menu

When abnormal detection contents are confirmed a When I do the following operation automatic diagnosis cord is displayed.

1. Preparation
   Remove the card and tape from this machine.
2. Service menu is dieplayed. (see Fig. S1)
   Pushed [PHOTO SHOT] button and [JOYSTICK LEFT ◀] button and [AUTO/MANUAL/FOCUS switch to FOCUS] button simmultaneously for 3 seconds.
3. Operating automatic diagnosis cord is displayed.
   Item [3] is selected with the [JOYSTICK UP or DOWN ▲/▼] button.
   [NO] is selected with the [JOYSTICK RIGHT ▶] button.
   [YES] is selected with the [JOYSTICK UP or DOWN ▲/▼] button.
   Press the [JOYSTICK CENTER] button.

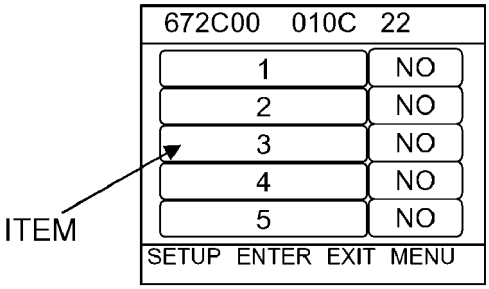
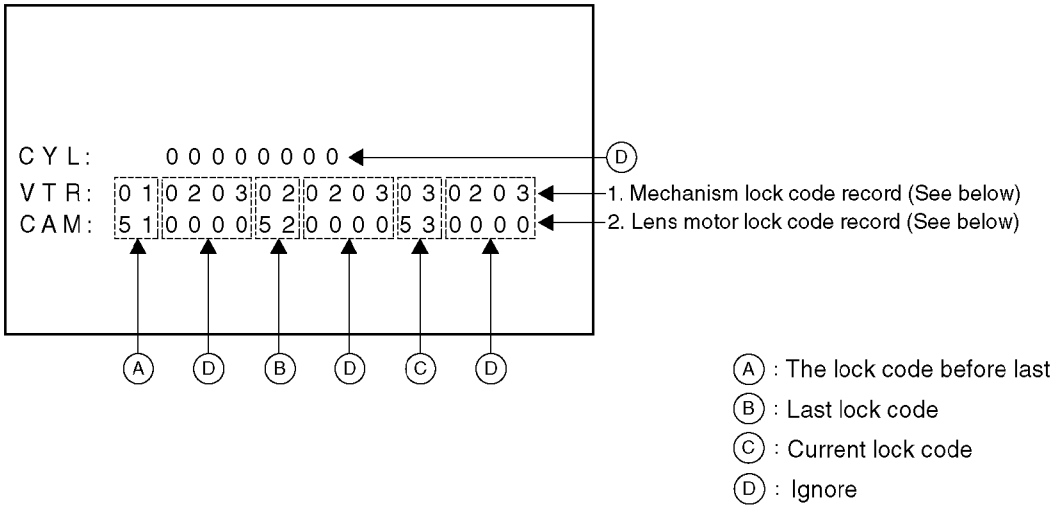


Fig. S1

NOTE:
Do not operate items Except for 3 in the Service Menu.

Self diagnosis cord contents are as follows.


CYL: 00000000
VTR: 01 0203 02 0203 03 0203
CAM: 51 0000 52 0000 53 0000
D
1. Mechanism lock code record (See below)
2. Lens motor lock code record (See below)
A D B D C D
A : The lock code before last
B : Last lock code
C : Current lock code
D : Ignore

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Display contents (self diagnosis cord contents)

Mechanism & Lens motor lock code

DISPLAY	CONDITION
01	T-REEL LOCK
02	S-REEL LOCK
03	UNLOADING LOCK
04	LOADING LOCK
05	CYLINDER
51	ZOOM MOTOR LOCK
52	FOCUS MOTOR LOCK

Turn off the power supply after confirmation.
Please do the error cord backup record the clear after repair completion.

CLEAR METHOD

If the Card and Tape inserted, take out it before Service Mode operation.

Making the mode dial of This Machine a tape recording mode, push [JOYSTICK LEFT ◀] button and [AUTO/MANUAL/FOCUS switch to FOCUS] button and [RECORDING START/STOP] button simultaneously for 3 seconds.

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7 Service Fixture & Tools

7.1. Service Tools and Equipment

Parts Name	Parts No.	Q'ty	Remarks
DV Camcorder	---	1	The Camcorder being adjusted.
Personnel Computer	---	1	With Tatsujin Software.
AC Adaptor	---	1	The AC Adaptor for DV Camcorder.
DC output Cable	---	1	The AC Adaptor for DV Camcorder.
Step Up Ring	VFK1164TAR37	1	For Collimator 37mm
TATSUJIN PC-Adjustment Program	VF0D2003AV30	1	
Extension Cable (45pin)	VFK1575C4520	1	FP6902 (Main) - FP4801 (Front)
Extension Cable (33pin)	VFK1575C3320	1	FP701 (Sub) - Lens Unit
Extension Cable (39pin)	VFK1459	1	FP201 (Sub) - Prism Unit
Extension Cable (25pin)	VFK1716	1	FP602 (Side R) - FP902 (Monitor)
Extension Cable (21pin)	VFK1442	1	FP603 (Side R) - FP801 (EVF)
Extension Cable (21pin)	VFK1442	1	FP6903 (Main) - Side L Unit
Extension Cable (60pin)	VFK1993	1	PS6901 (Main) - PS6301 (Side R)
Extension Cable (18pin)	VFK1443	1	FP1001 (Main) - Rear Case Unit
Extension Cable (5pin)	VFK1465	1	FP6302 (Side R) - Operation (R) Unit
Extension Cable (10pin)	VFK1440	1	FP6701 (Front) - Barrier Motor Unit

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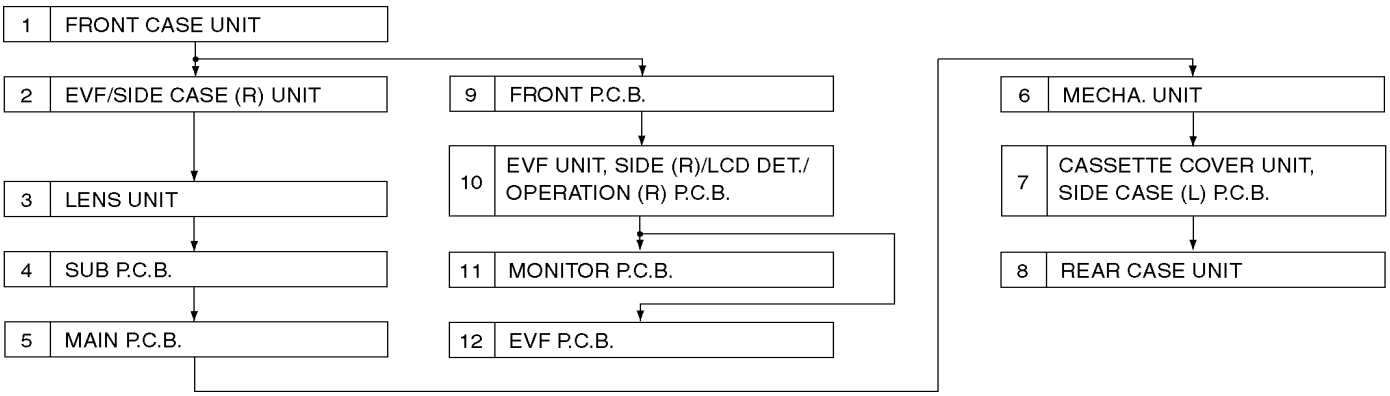
8 Disassembly and Assembly Instructions

8.1. Disassembly Frow Chart

This flow chart indicates the disassembly steps the cabinet parts, P.C.B. and Mecha. Unit in order to access to be serviced. When reinstalling, perform the steps in the reverse order.


1 FRONT CASE UNIT
2 EVF/SIDE CASE (R) UNIT
3 LENS UNIT
4 SUB P.C.B.
5 MAIN P.C.B.
9 FRONT P.C.B.
10 EVF UNIT, SIDE (R)/LCD DET./ OPERATION (R) P.C.B.
11 MONITOR P.C.B.
12 EVF P.C.B.
6 MECHA. UNIT
7 CASSETTE COVER UNIT, SIDE CASE (L) P.C.B.
8 REAR CASE UNIT

8.2. P.C.B. Layout

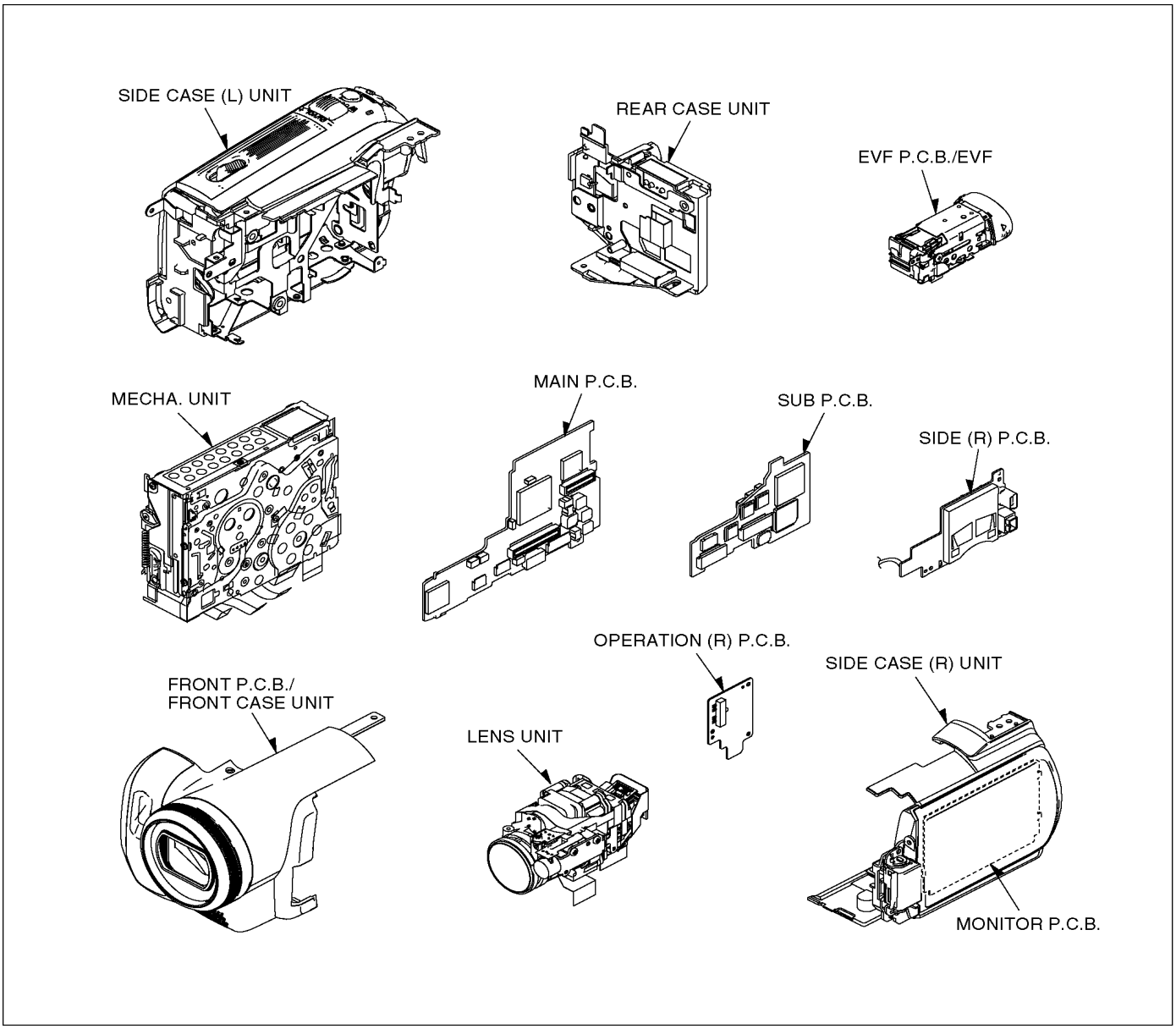


Fig. F1

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8.3. Disassembly Procedures

Flow-Chart for Disassembly Procedure

No.	Item / Part	Fig.	Removal (Screw,Connector,Flex. & Other)
1	Front Case Unit	Fig.D2	2-Screws (A), 2-Screws (B)
		Fig.D3	2-Screws (C)
		Fig.D4	Open the LCD Unit 1-Screw (D)
		Fig.D5	1-Connector FP4801 Front Case Unit
2	EVF/Side Case (R) Unit	Fig.D6	2-Screws (E)
		Fig.D7	1-Screw (F)
		Fig.D8	1-Connector PS6901 EVF/Side Case (R) Unit
3	Lens Unit	Fig.D9	1-Screw (G) 2-Connectors FP201, FP701 Lens Unit
4	Sub P.C.B.	Fig.D10	1-Connector PS3001 Sub P.C.B.
5	Main P.C.B.	Fig.D11	8-Connectors FP1001, FP2201, FP2202, FP2203, FP2204, FP5001,FP6902, FP6903 1-Screw (H) 3-Tabs Main P.C.B.
6	Mecha. Unit	Fig.D12	Open the Cassette Cover 3-Screws (I) Mecha. Unit
7	Cassette Cover Unit, Side Case (L) P.C.B.	Fig.D13	4-Screws (J), 1-Screw (K), 1-Screw (L)
		Fig.D14	Remove the Cassette Cover Unit with the procedure of arrow 1,2.
		Fig.D15	1-Connector FP6101 1-Screw (M) Side (L) P.C.B.
8	Rear Case Unit	Fig.D16	1-Screw (N) Remove the Lens Frame with the procedure of arrow 1. 1-Screw (O) 3-Tabs Top Case
		Fig.D17	1-Screw (P) Grip Belt, Belt Plate 2-Screws (Q),1-Screw (R) Side Case (L) 1 Unit 1-Screw (S) Rear Case Unit
9	Front P.C.B.	Fig.D18	1-Connector FP6701 2-Screws (T),1-Screw (U) Front P.C.B.
10	EVF Unit, Side (R) / LCD Det./ Operation (R) P.C.B.	Fig.D19	1-Screw (V) Shoe Angle
		Fig.D20	1-Screw (W), 1-Screw (X) 1-Connector FP603 EVF Unit
		Fig.D21	1-Screw (Y) SR Heat Sink
		Fig.D22	3-Connectors FP602, PS6301, FP6302 1-Screw (Z), 1-Screw (a) Side (R) /LCD Det. P.C.B.
		Fig.D23	2-Screws (b) Operation (R) P.C.B.
11	Monitor P.C.B.	Fig.D24	Turning the LCD Unit 2-Screws (c) LCD Unit
		Fig.D25	2-Screws (d) 6-Tabs LCD Case (Upper) Unit
		Fig.D26	1-Connector FP902 LCD Hinge Unit, LCD Earth Plate
		Fig.D27	1-Connector FP901 3-Tabs Monitor P.C.B.
12	EVF P.C.B.	Fig.D28	1-Screw (e) 3-Tabs 1-Connector FP801 EVF Support Piece
		Fig.D29	2-Screws (f), 2-Slide Spacers (g) EVF Frame
		Fig.D30	1-Screw (h) View ADJ. Unit, Slide Case Holder 2-Tabs Click Spring, EVF LCD Unit
		Fig.D31	1-Connector FP802 3-Tabs EVF P.C.B.

If the Card inserted,take out it before disassembling.

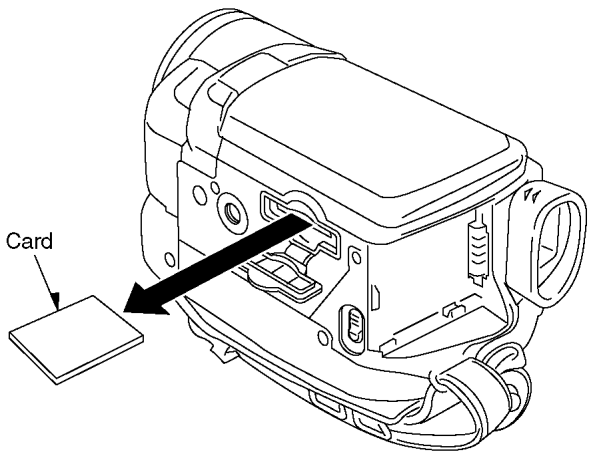

Fig. D1

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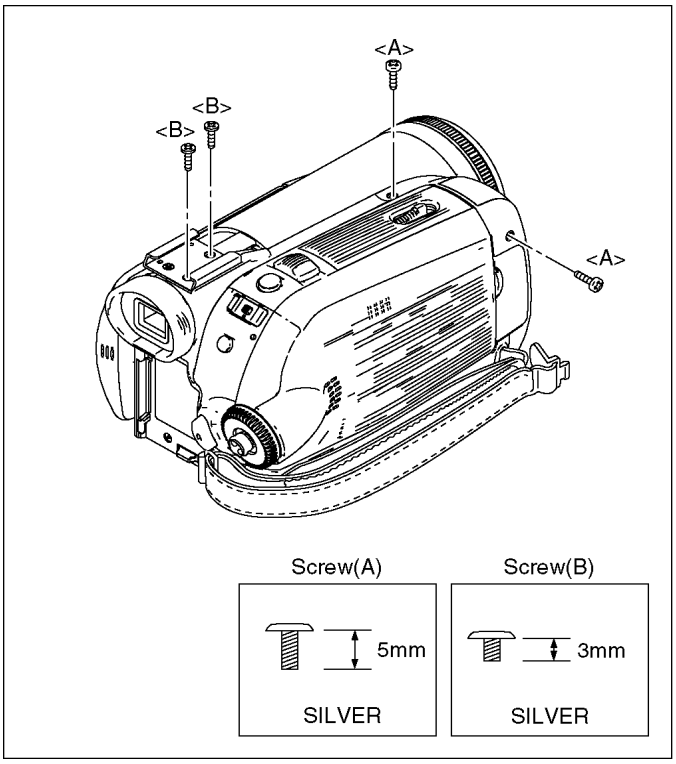

Fig. D2

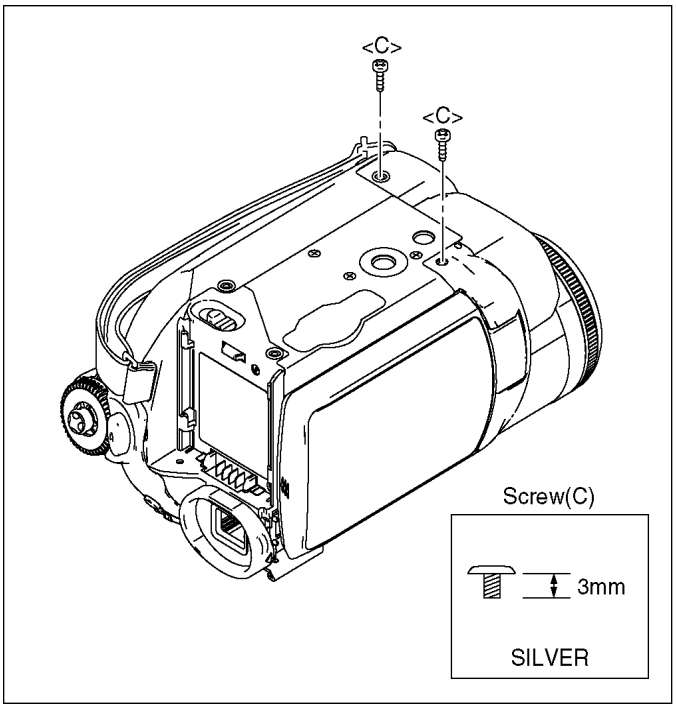

Fig. D3

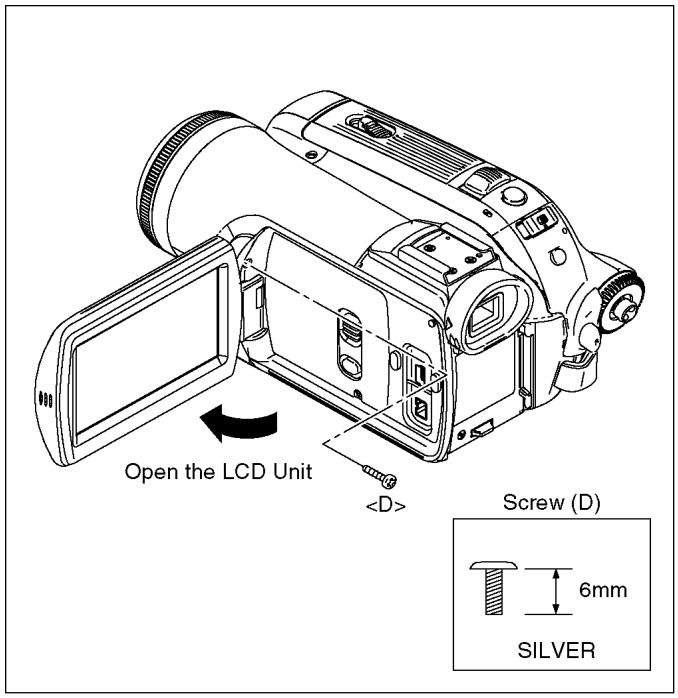

Fig. D4

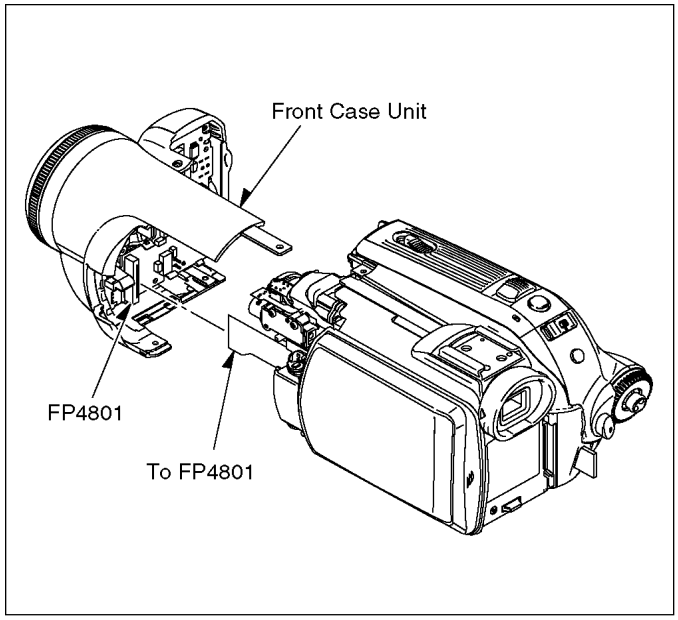

Fig. D5

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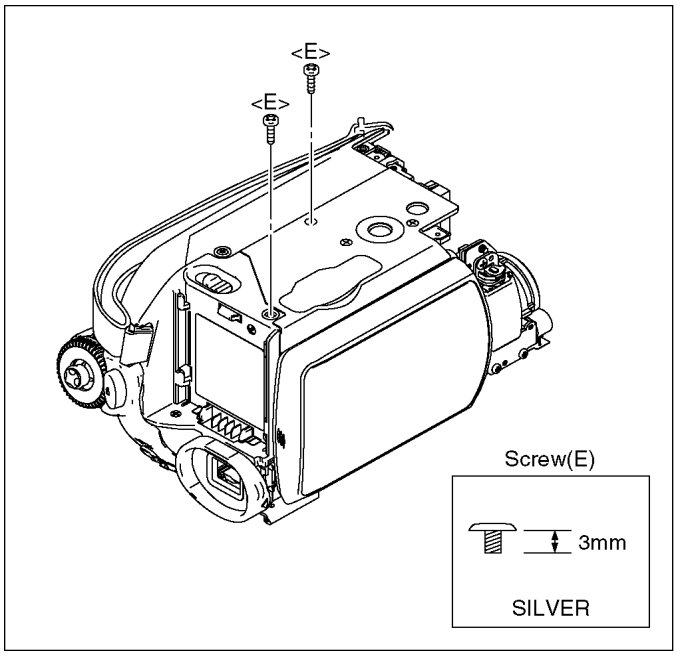

Fig. D6

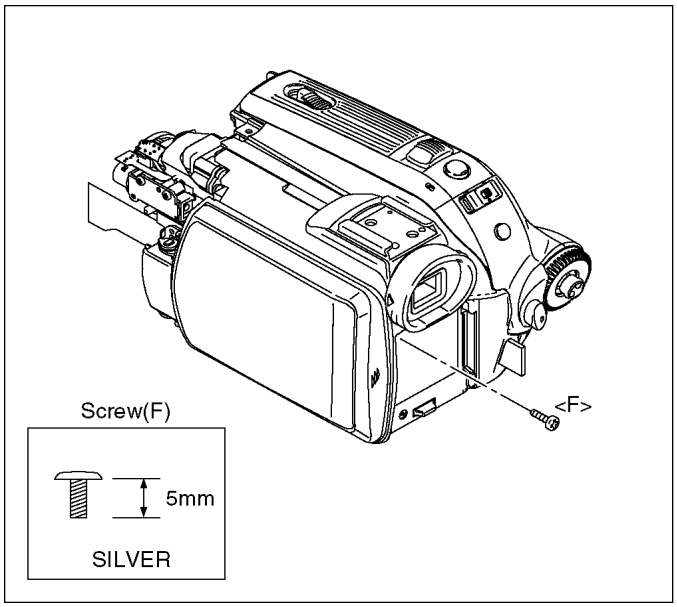

Fig. D7

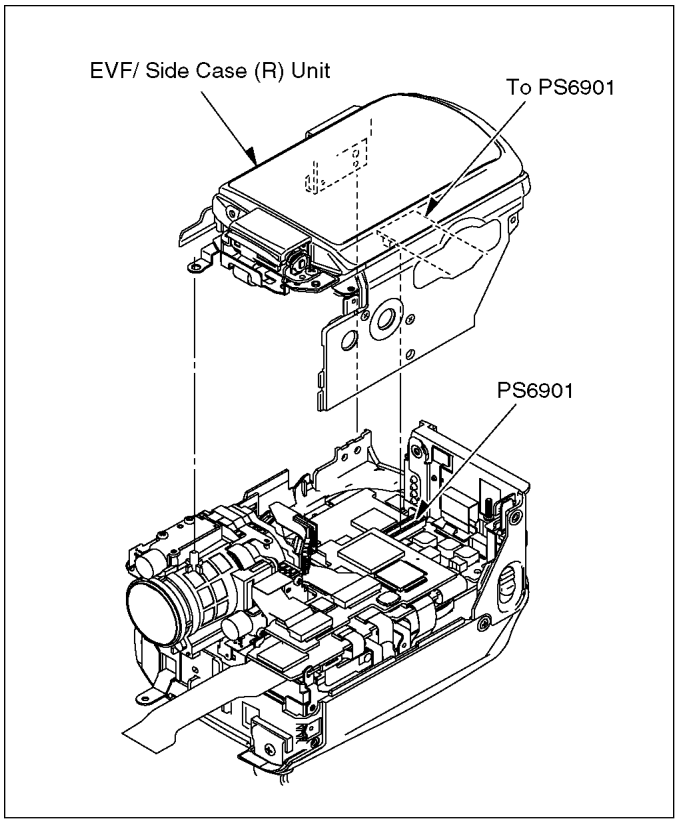

Fig. D8

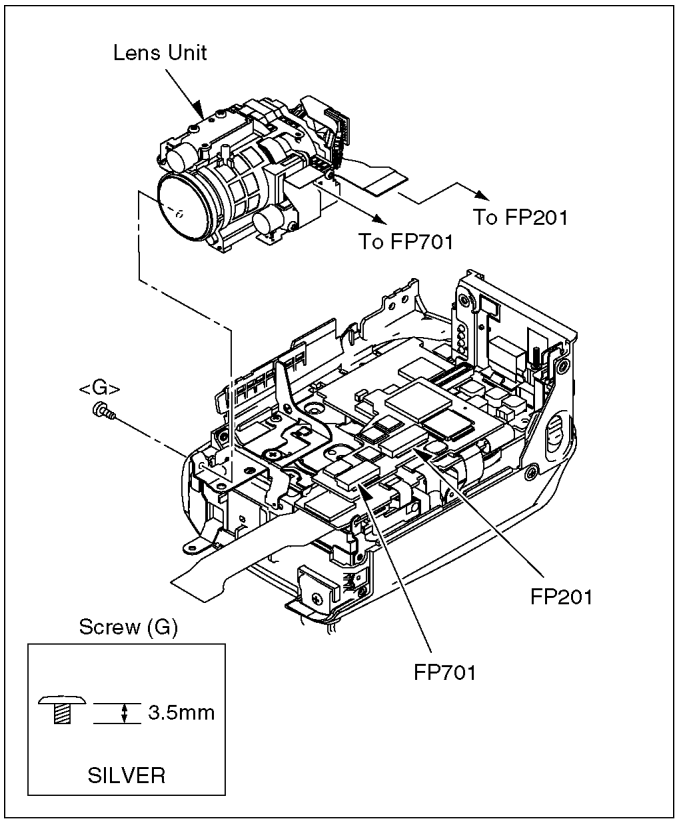

Fig. D9

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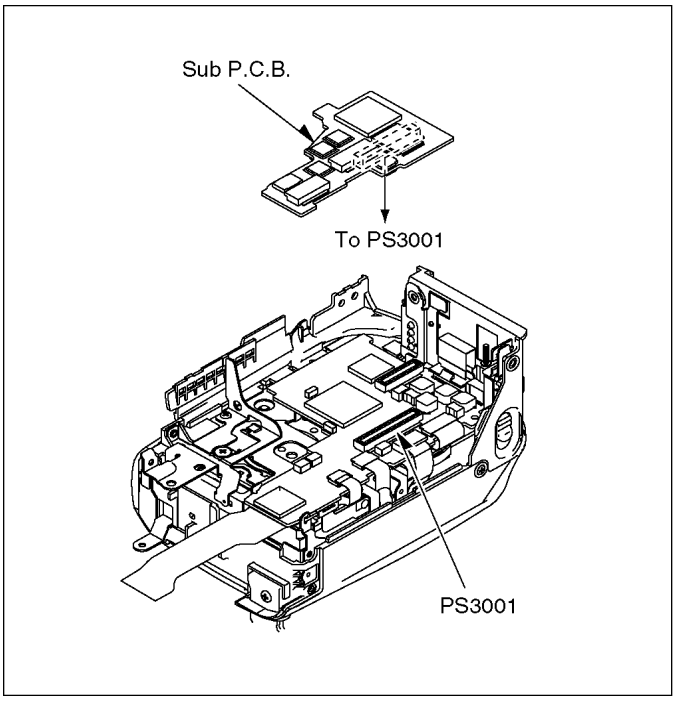

Fig. D10

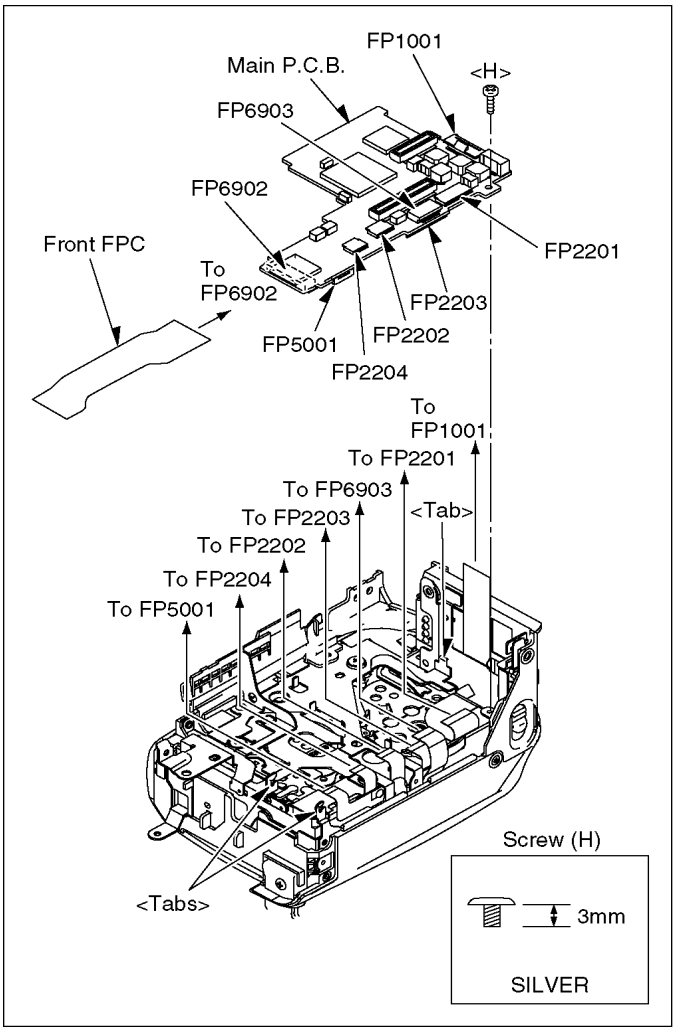

Fig. D11

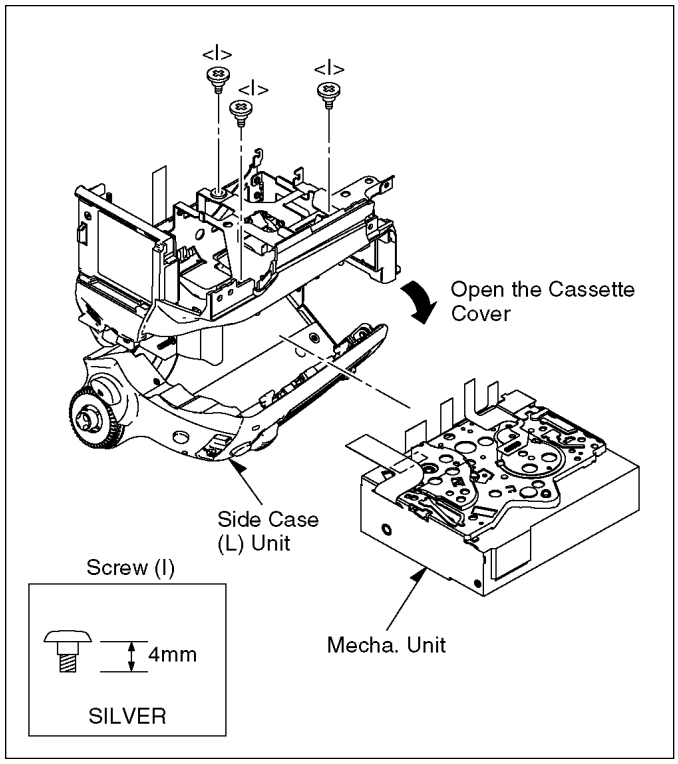

Fig. D12

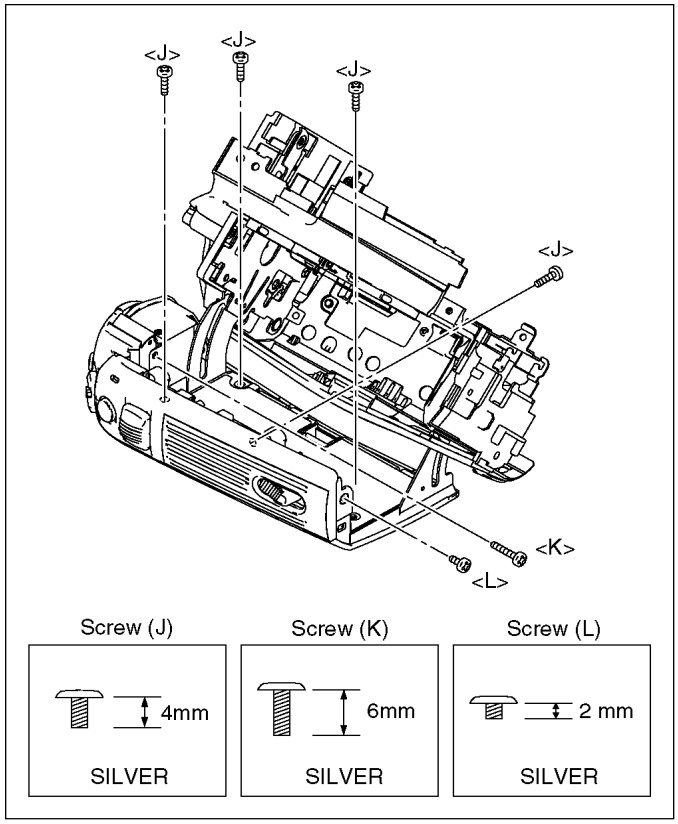

Fig. D13

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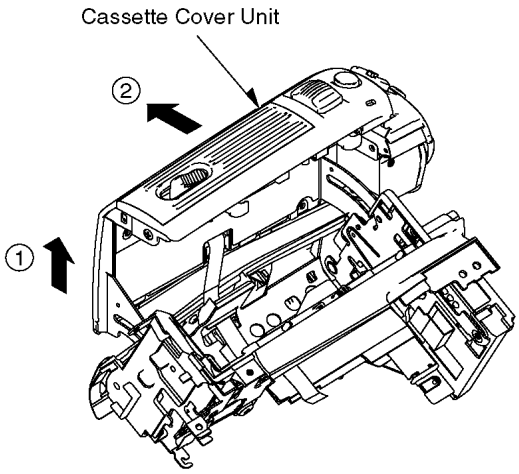

Remove the Cassette Cover Unit with the procedure of arrow 1,2.

Fig. D14

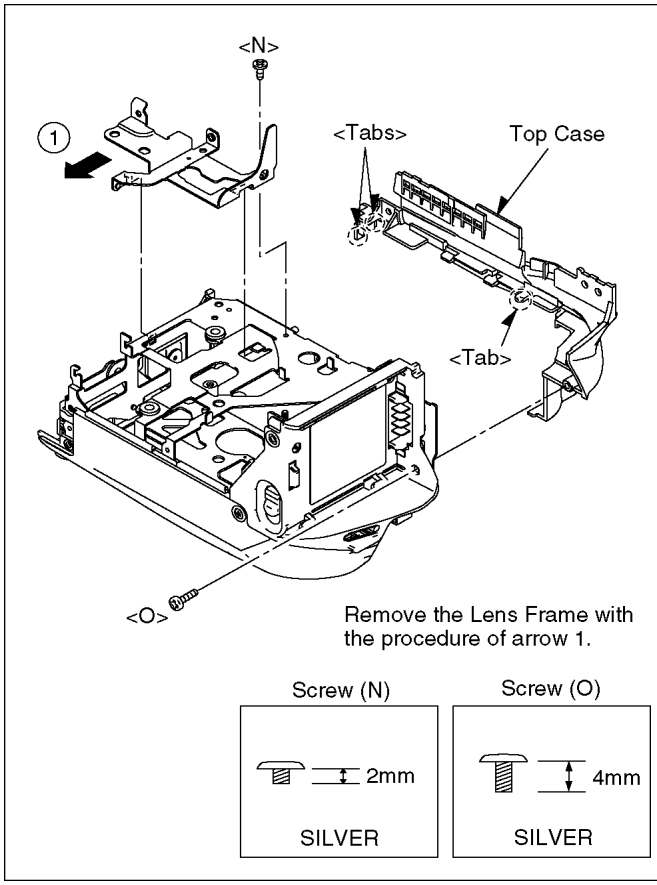

Fig. D16

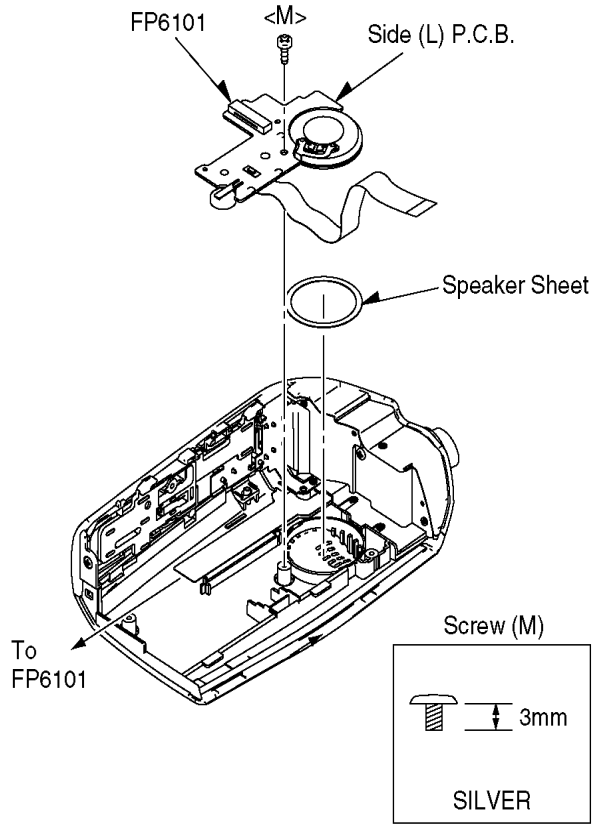

Fig. D15

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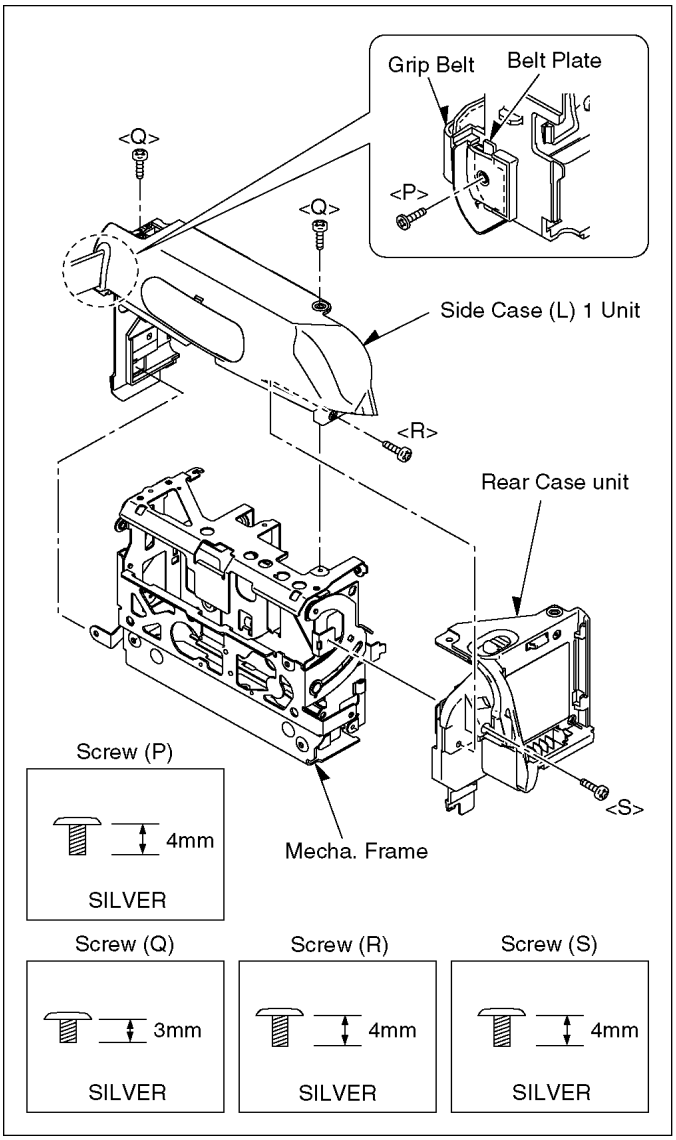

Fig. D17

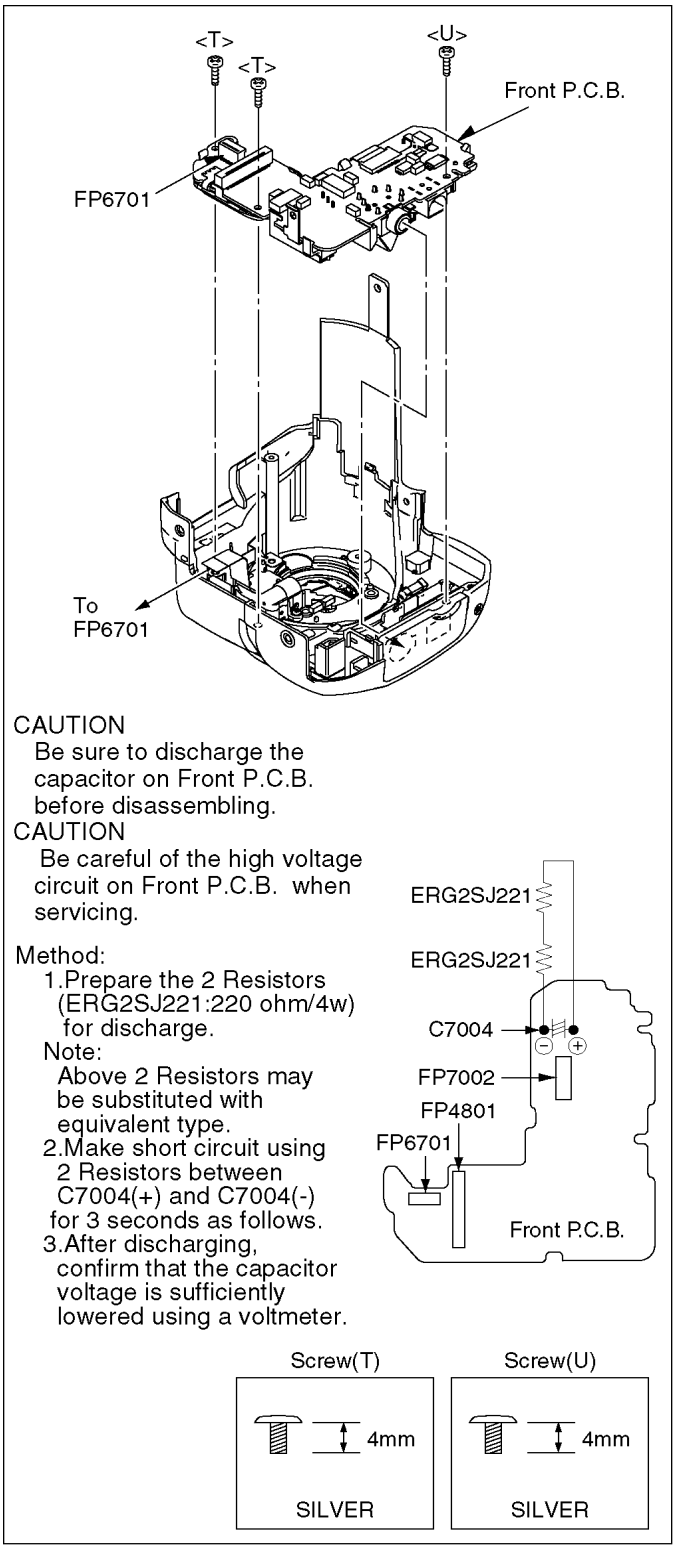

Fig. D18

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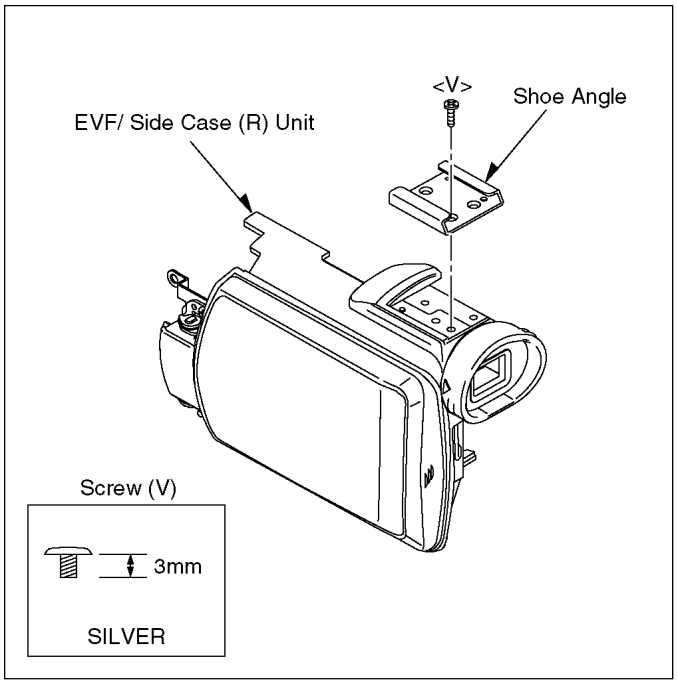

Fig. D19

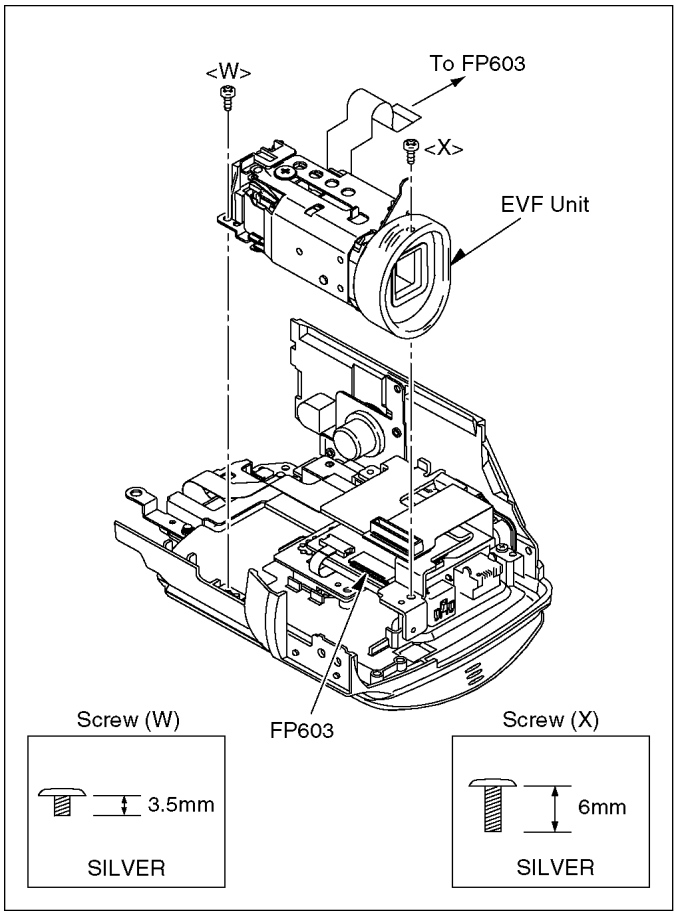

Fig. D20

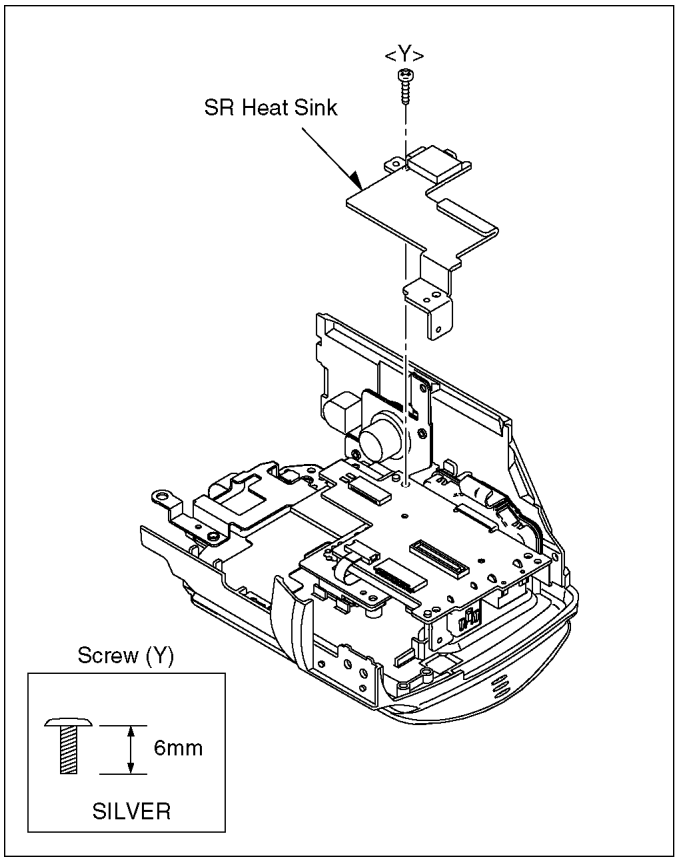

Fig. D21

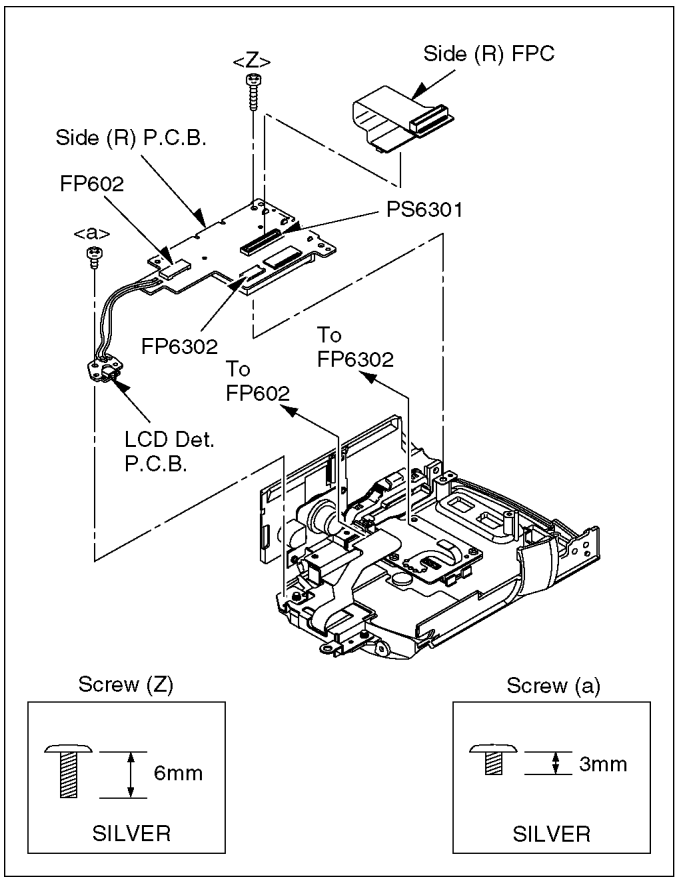

Fig. D22

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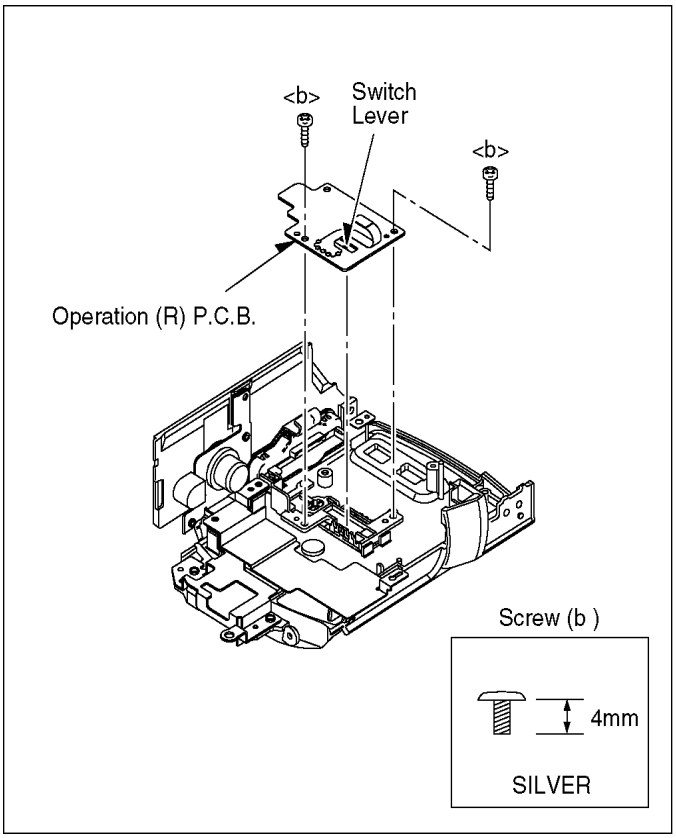

Fig. D23

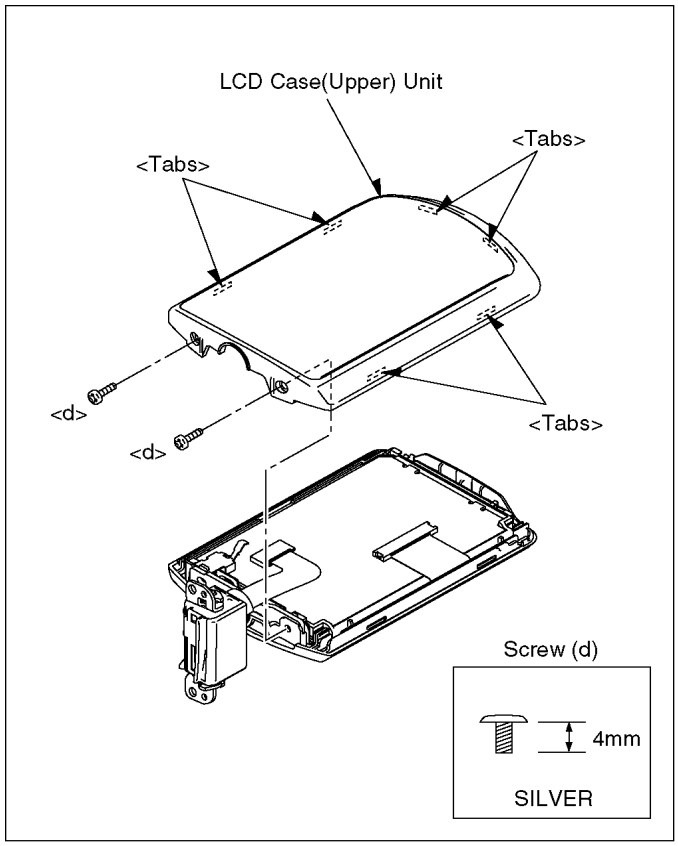

Fig. D25

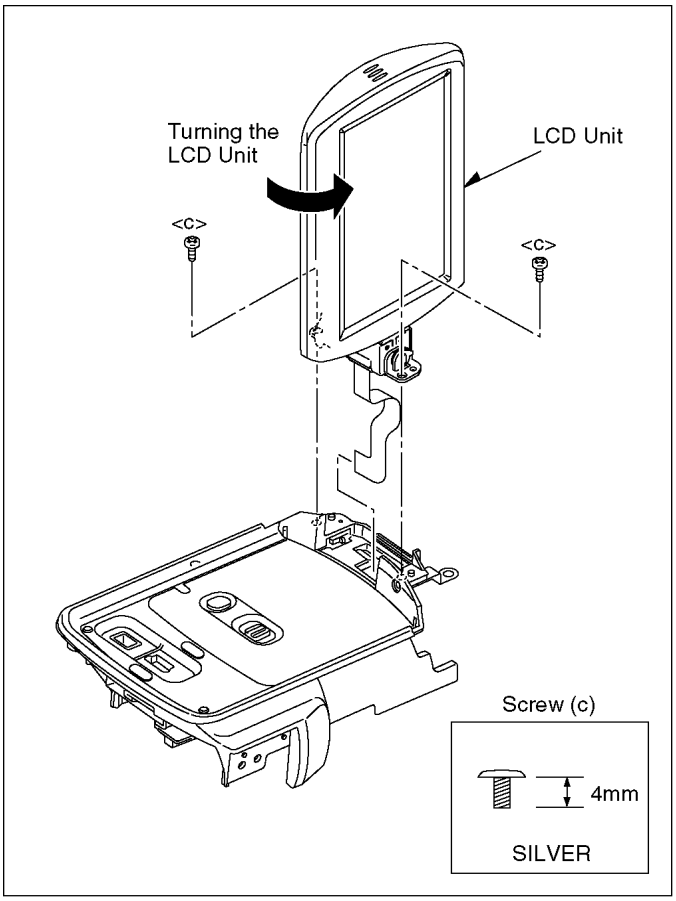

Fig. D24

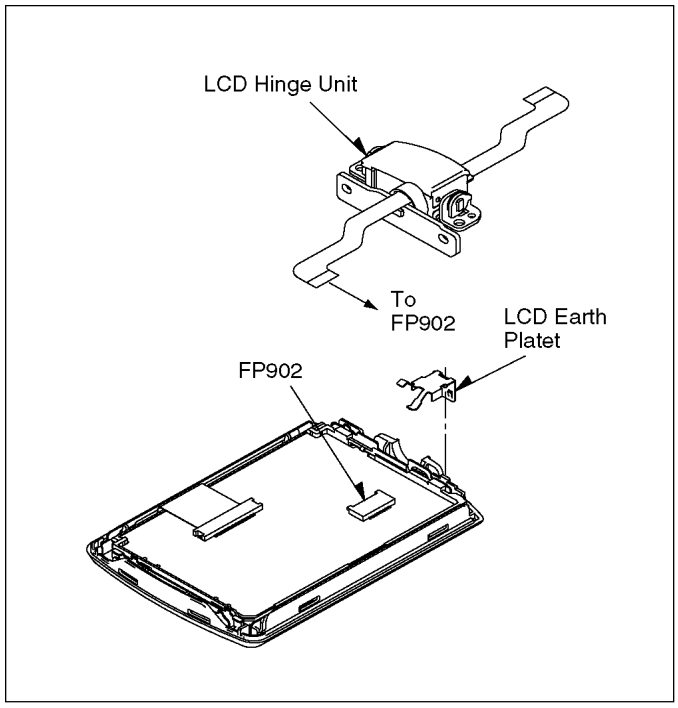

Fig. D26

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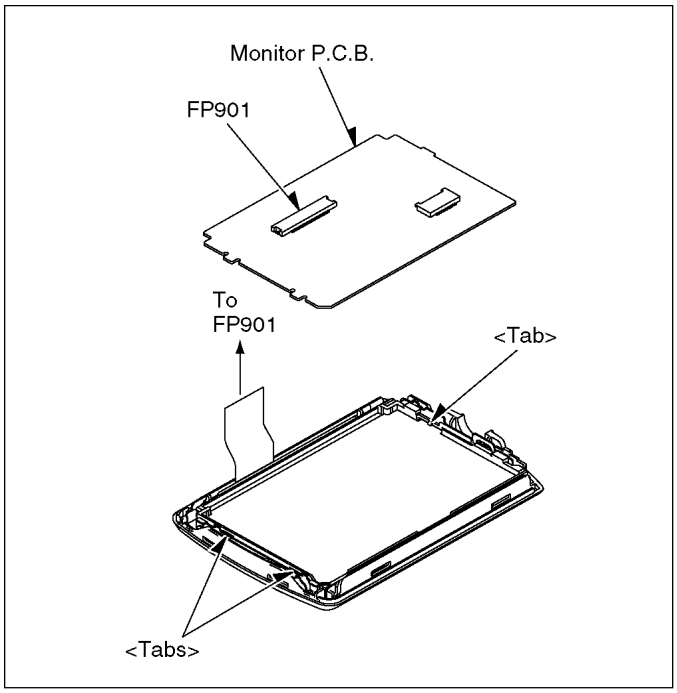

Fig. D27

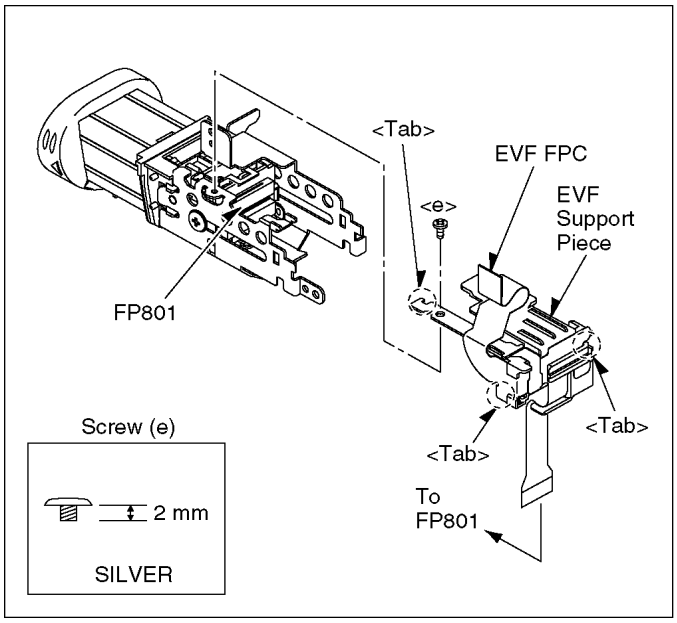

Fig. D28

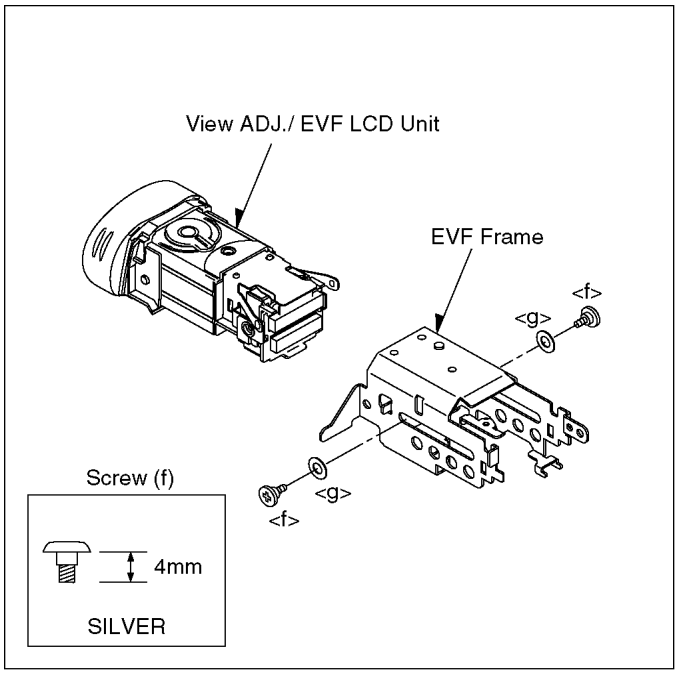

Fig. D29

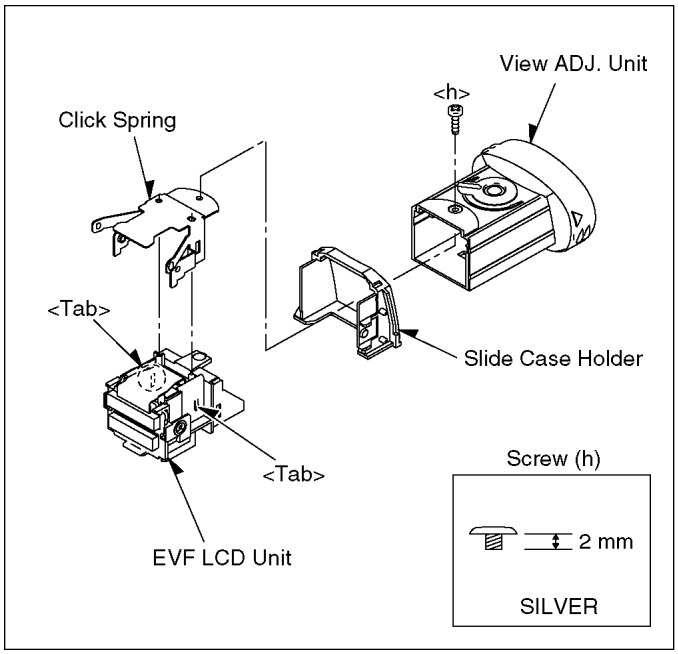

Fig. D30

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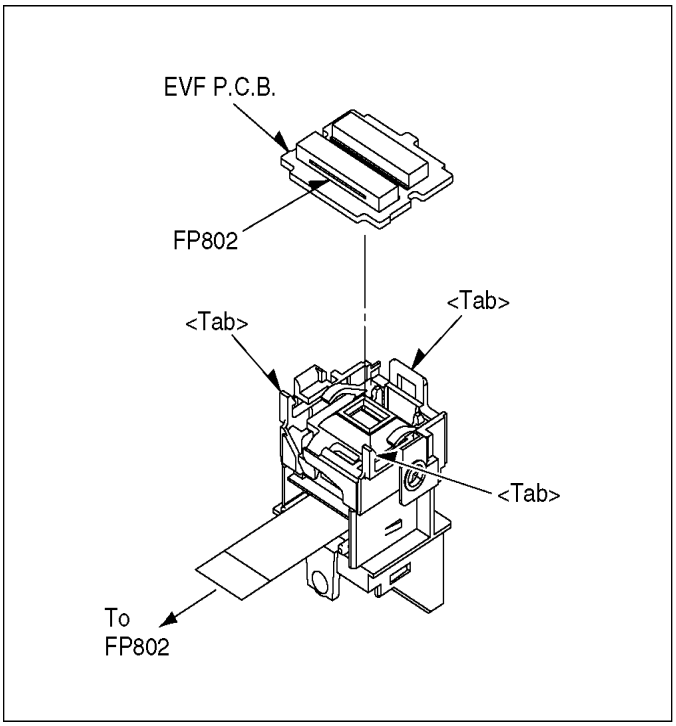

Fig. D31

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8.4. Disassembly Procedures Mecha. Unit

Flow-Chart for Disassembly Procedure

No.	Item / Part	Fig.	Removal (Screw, Connector, Flex. & Other)
1	Cassette Up Unit	Fig. M1	It makes the mechanism position in Eject condition (For Battery)
		Fig. M2	3-Screws (A)
		Fig. M3	3-Tabs I remove the piece arrangement unit from rail department
2	Cylinder Unit	Fig. M4	1-Screw (B)
		Fig. M5	3-Screw (C) Cylinder Unit

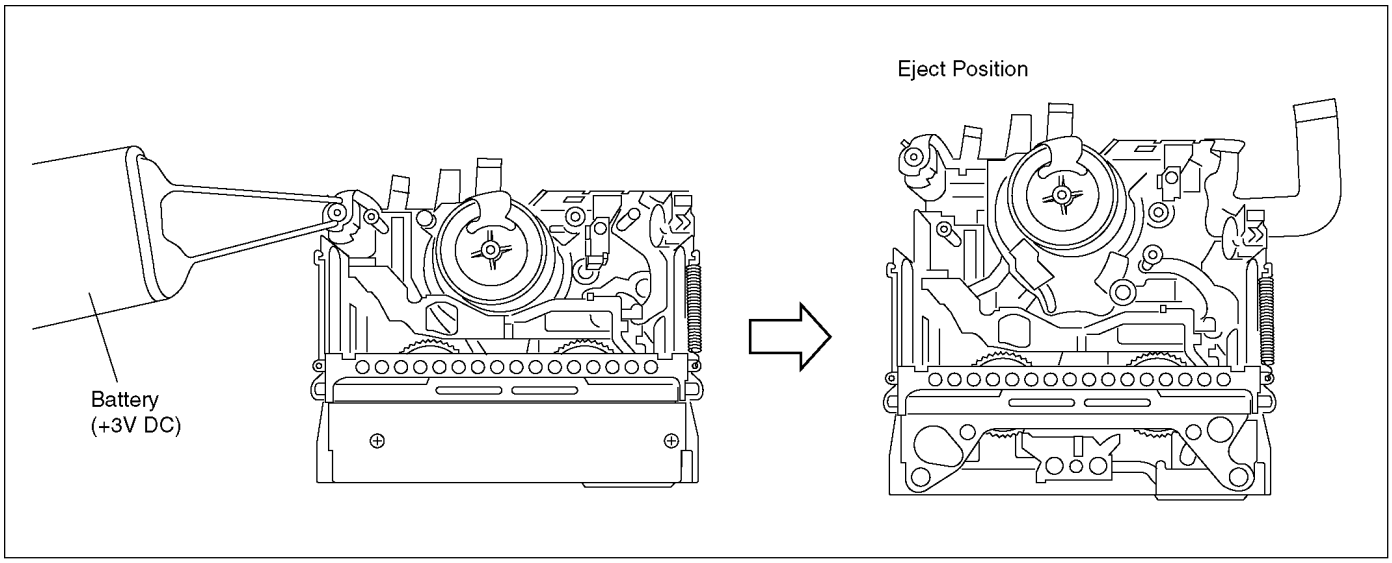

Fig. M1

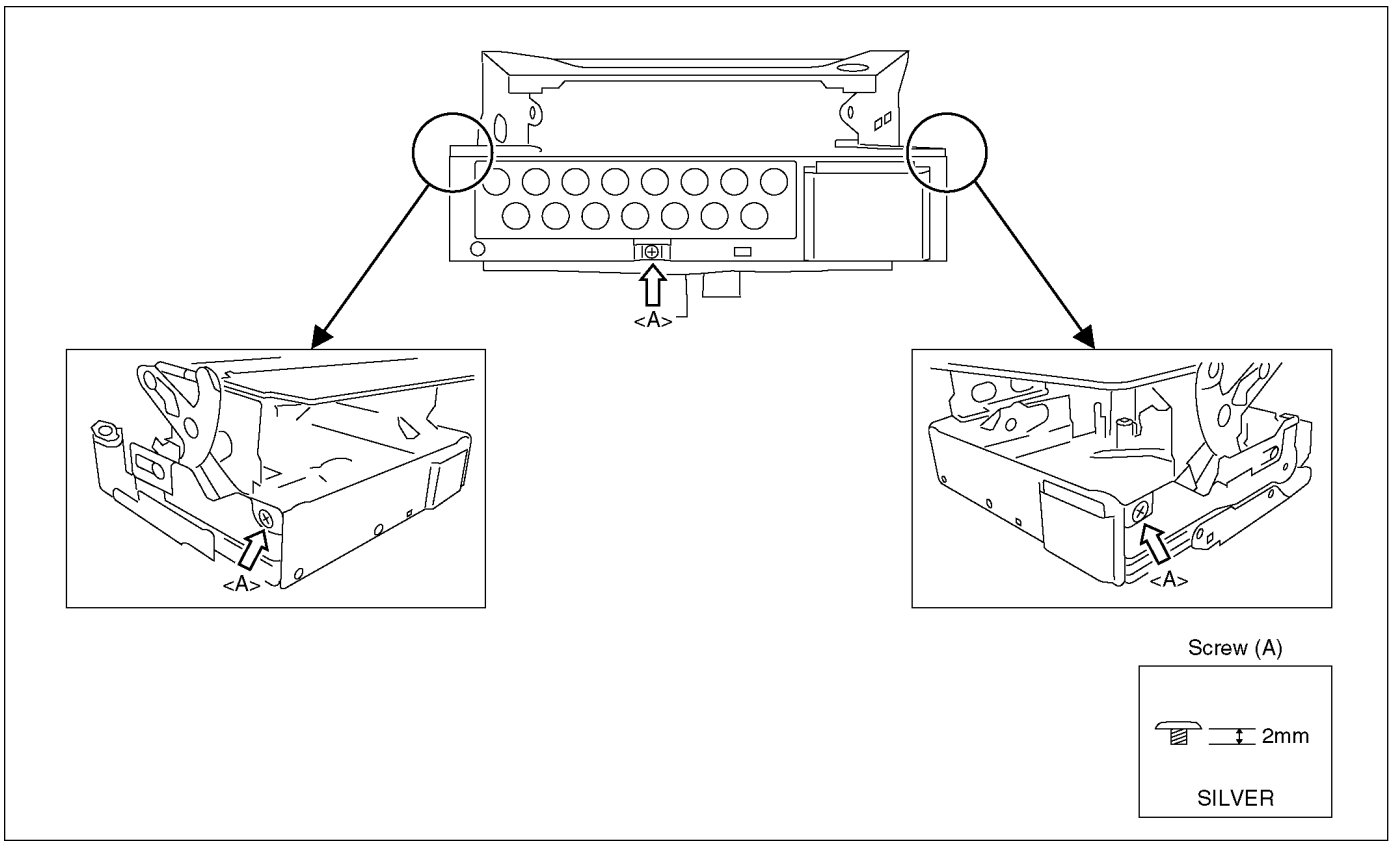

Fig. M2

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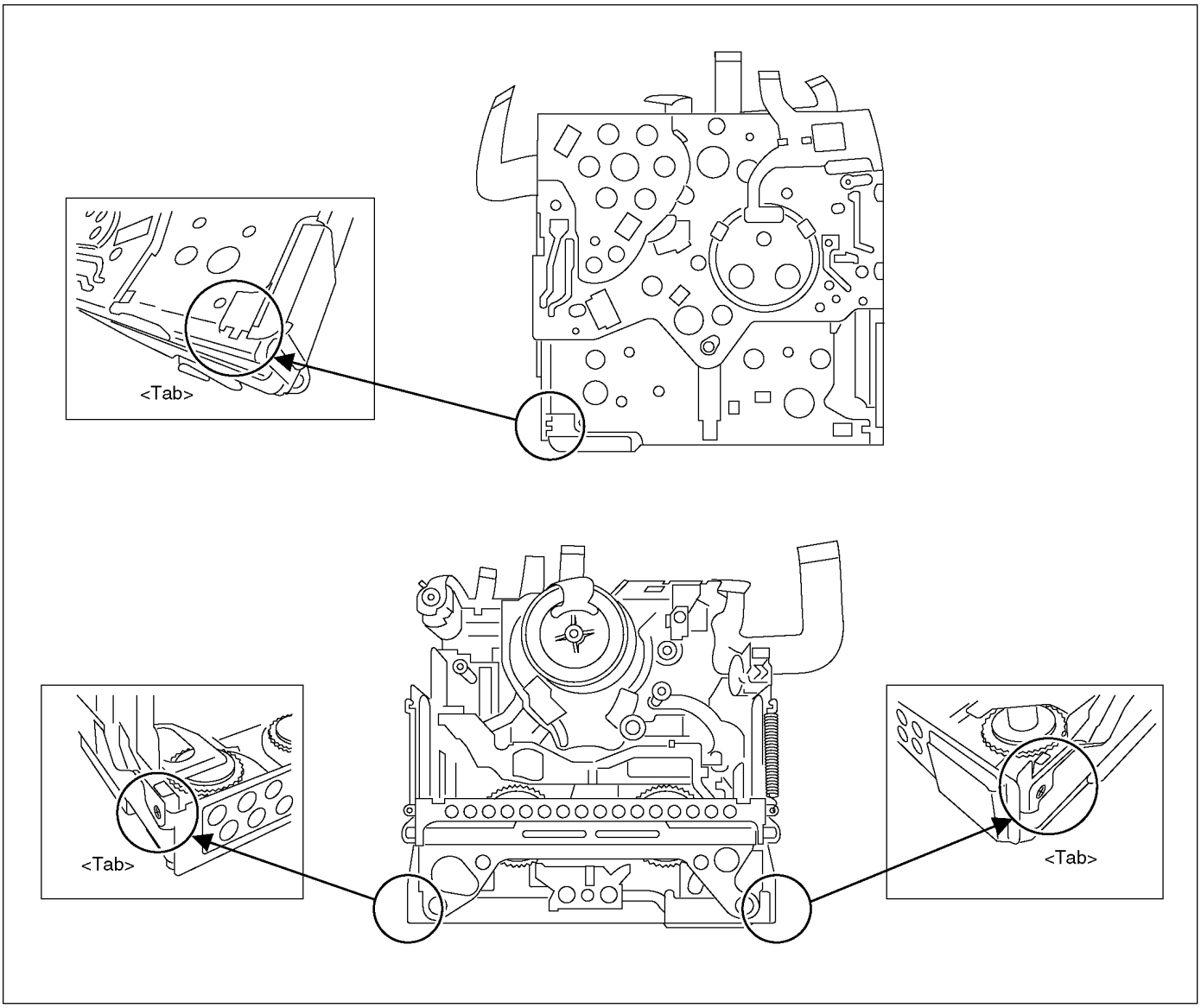

Fig. M3

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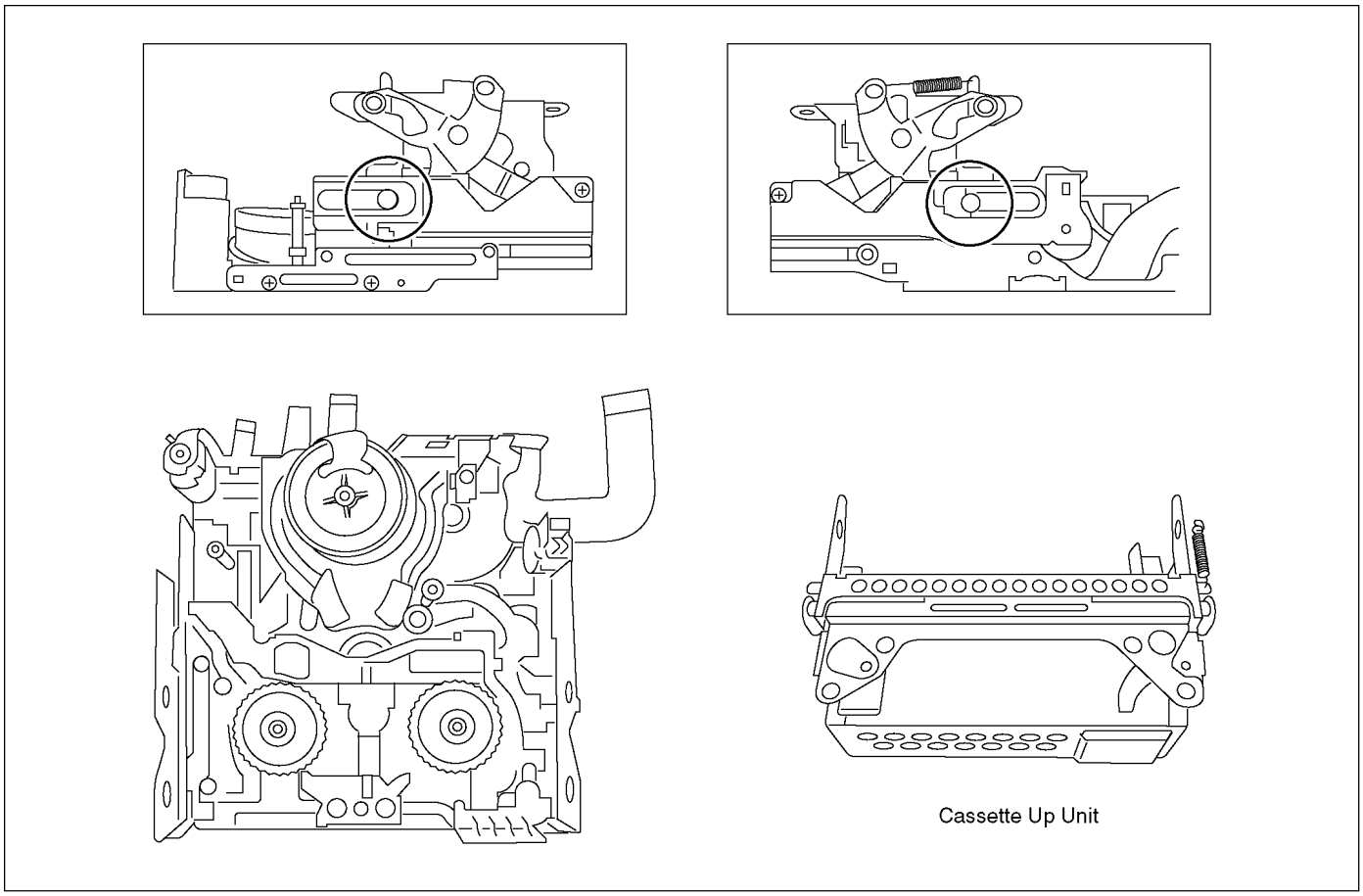

Fig. M4

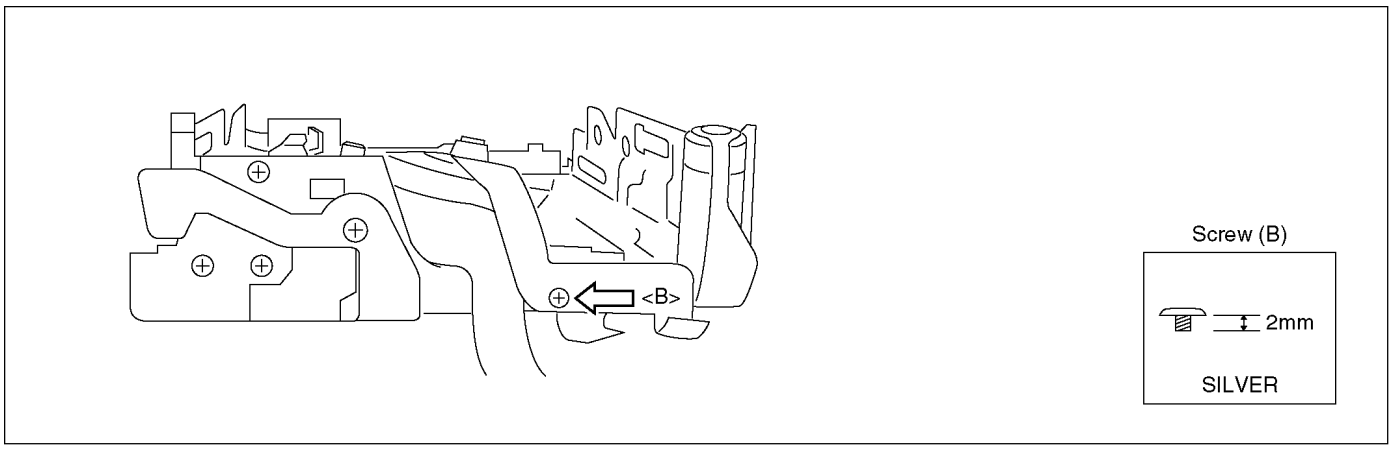

Fig. M5

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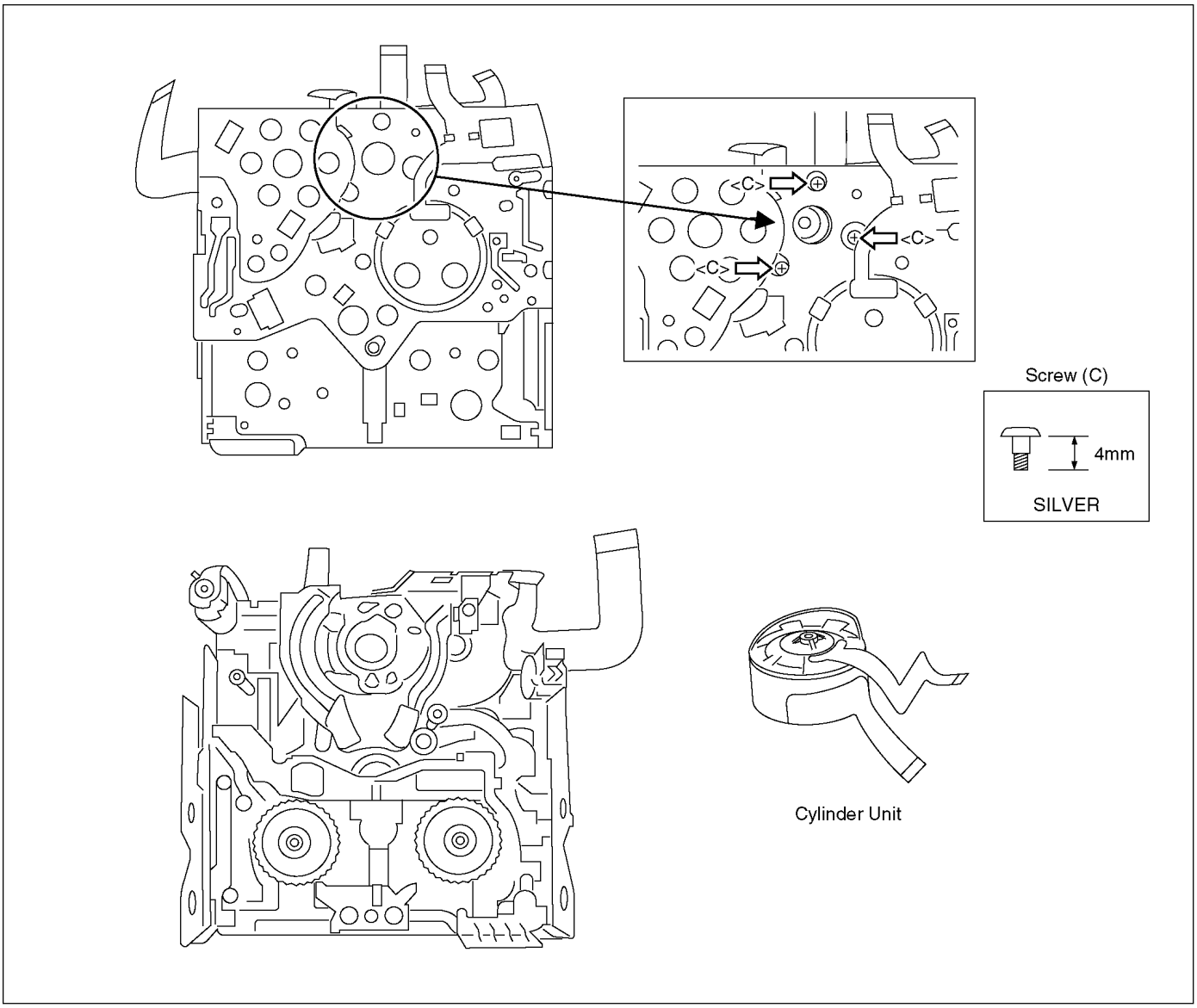

Fig. M6

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8.5. Disassembly Procedures of Camera Lens Unit

The following flowchart describes order or steps for removing the Camera lens unit and certain printed circuit boards in order to make access to the item needing service.
To reassemble the unit follow the steps in reverse order.

1. Prism Unit	Ref.-No.301
2. Optical Filter	Ref.-No.302
3. IRIS Unit	Ref.-No.304-3
4. Focus Motor Unit	Ref.-No.304-10
5. Master Flange Unit	Ref.-No.304-8
6. 4th Lens Frame Move Unit	Ref.-No.304-5
7. OIS Unit	Ref.-No.304-13
8. 2nd Lens Frame Move Unit & Guide Pole	Ref.-No.304-2/304-6/304-7
9. 1st Lens Frame Move Unit & Zoom Motor Unit	Ref.-No.304-1/304-9

Note 1: Each Ref.numbers are equivalent to number of Fig.L2 and Parts List.

Fig. L1

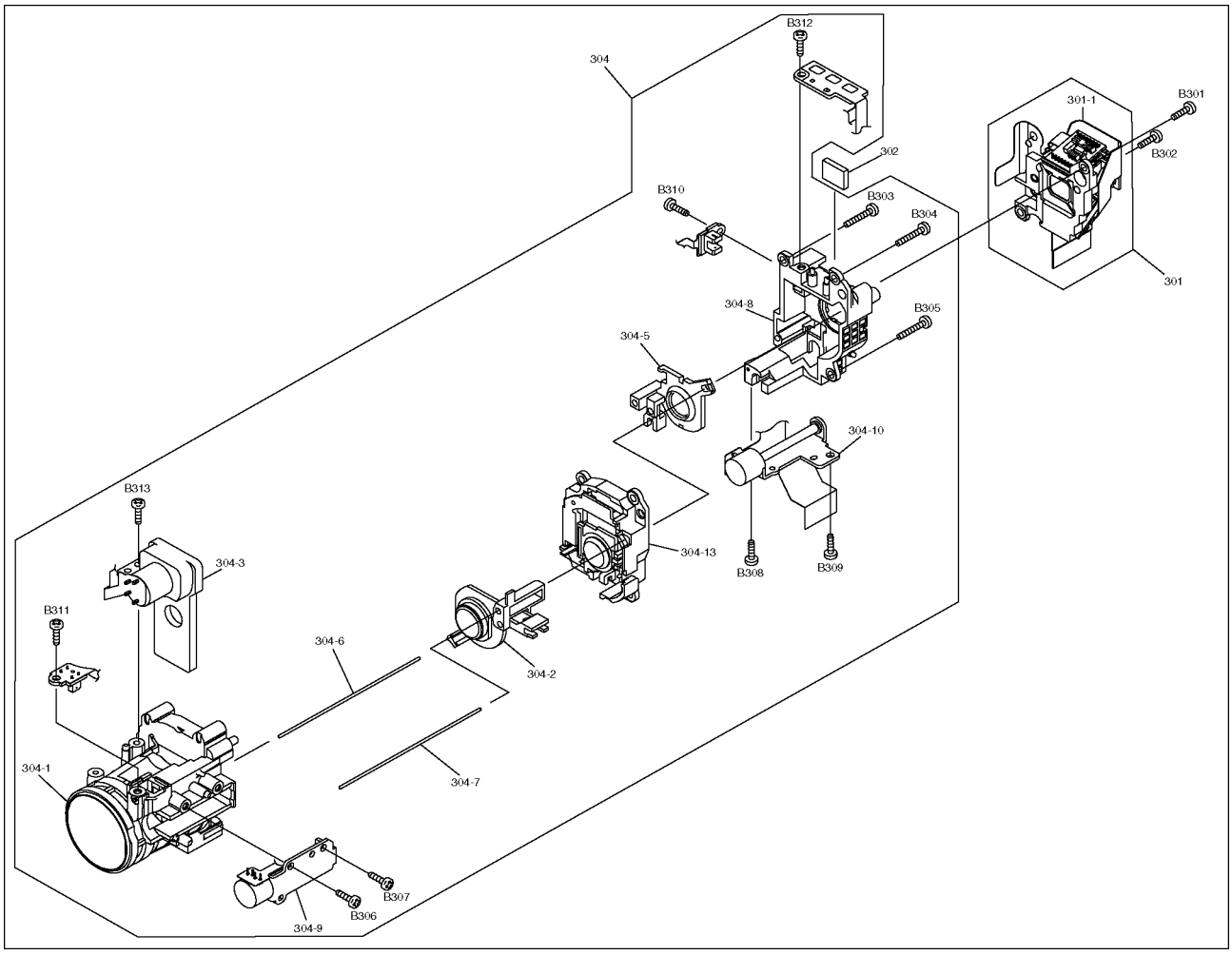

Fig. L2

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9 Measurements and Adjustments

9.1. Service Positions

9.1.1. List of the extension cables

Use the following extension cables when checking or adjusting individual circuit boards except module Parts.
(Main P.C.B. and Sub P.C.B.)

Ref.	Part No.	Pin	Part Name	Connection	Q'ty	Remarks
(1)	VFK1575C4520	45	Flat Cable	FP6902 (Main) - FP4801 (Front)	1	as NV-GS400
(2)	VFK1575C3320	33	Flat Cable	FP701 (Sub) - Lens Unit	1	as NV-GS200
(3)	VFK1459	39	Flat Cable	FP201 (Sub) - Prism Unit	1	as NV-DS7
(4)	VFK1716	25	Flat Cable	FP602 (Side R) - FP902 (Monitor)	1	as NV-GX5
(5)	VFK1465	5	Flat Cable	FP6302 (Side R) - Operation (R) Unit	1	as NV-GS50
(6)	VFK1440	10	Flat Cable	FP6701 (Front) - Barrier Motor Unit	1	as NV-DS7
(7)	VFK1993	60	Flat Cable	PS6901 (Main) - PS6301 (Side R)	1	NEW
(8)	VFK1442	21	Flat Cable	FP603 (Side R) - FP801 (EVF)	1	as NV-DS7

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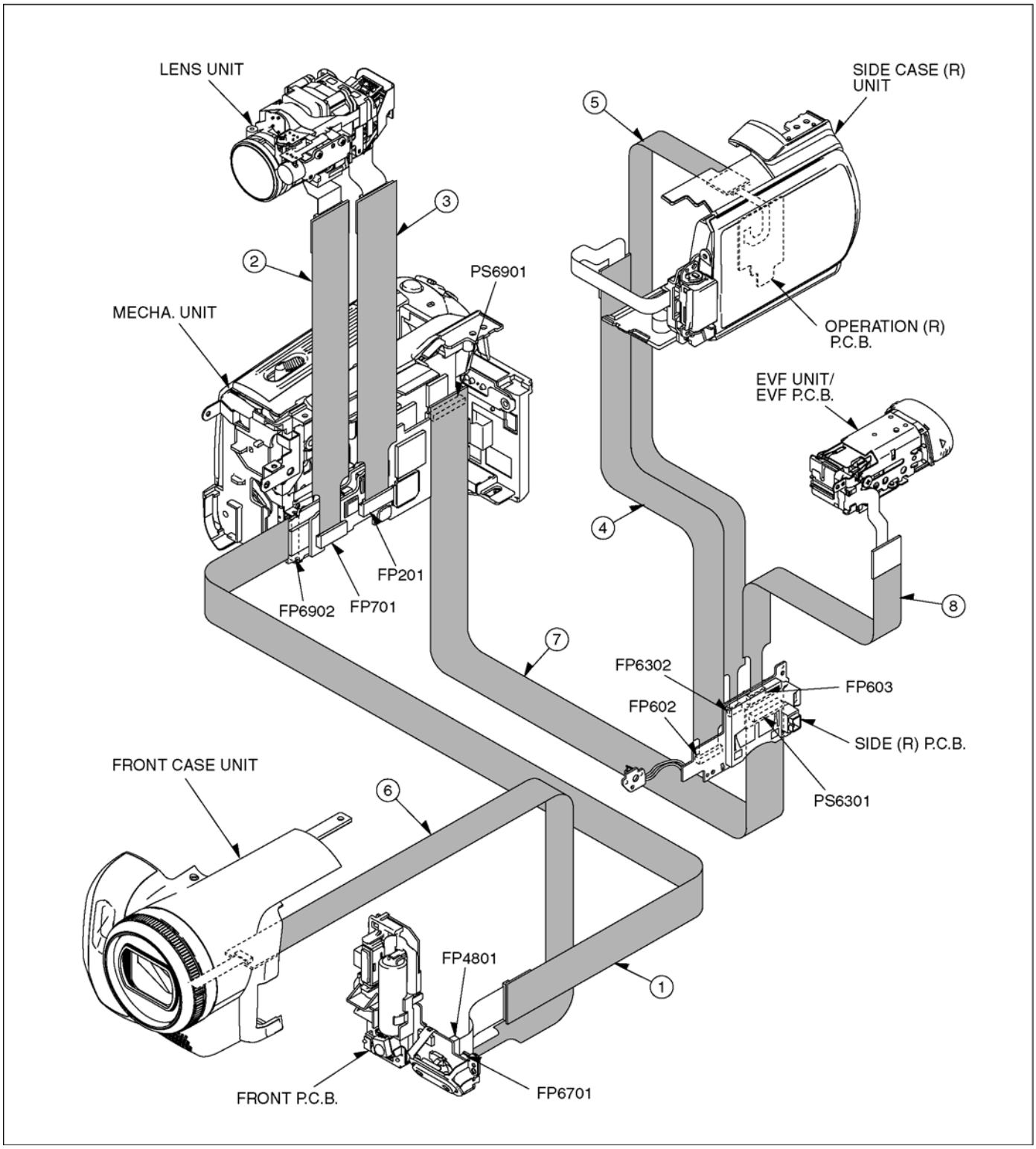
9.1.2. Checking and repairing individual circuit boards except module parts (Main P.C.B. and Sub P.C.B.)

How to use extension cables.



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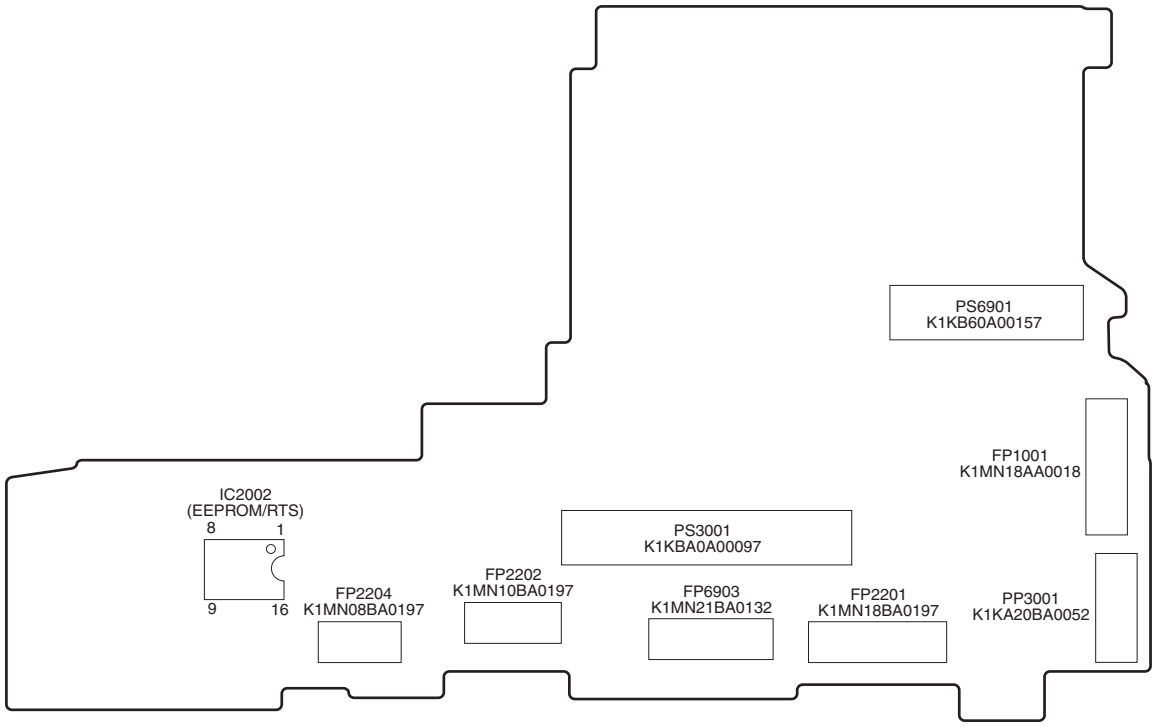
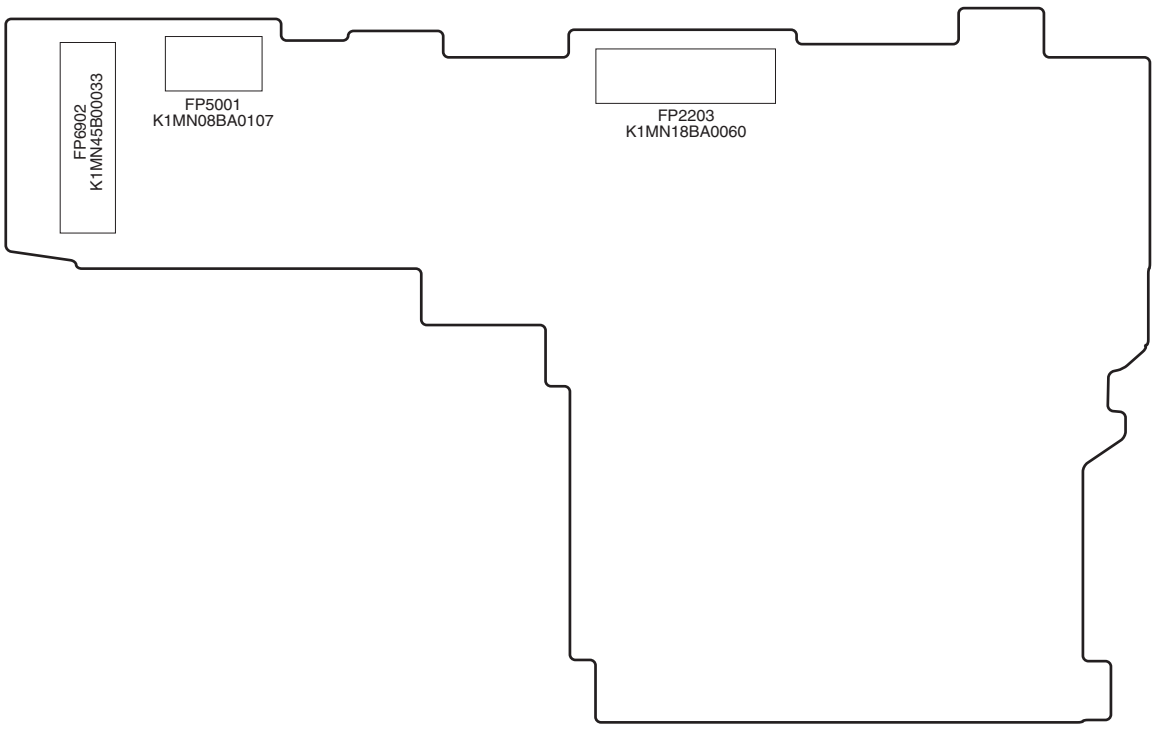
9.2. Location for Connectors of the Main P.C.B. & Sub P.C.B.

9.2.1. Main P.C.B.



(COMPONENT SIDE)



(FOIL SIDE)

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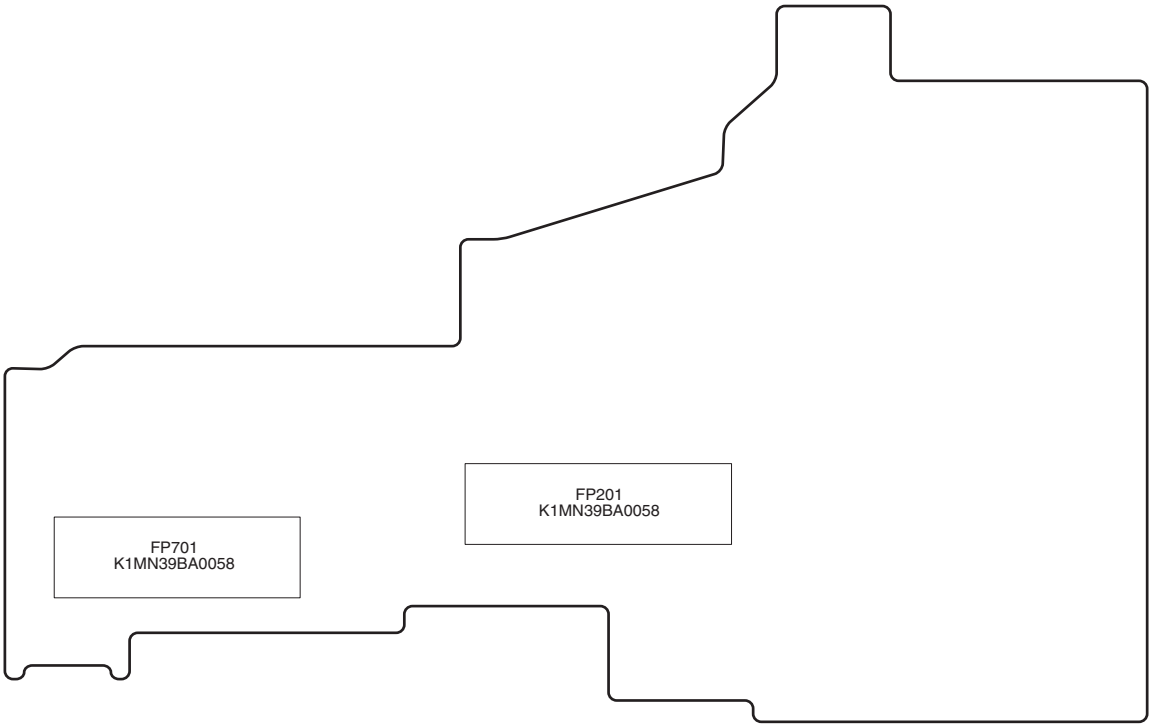
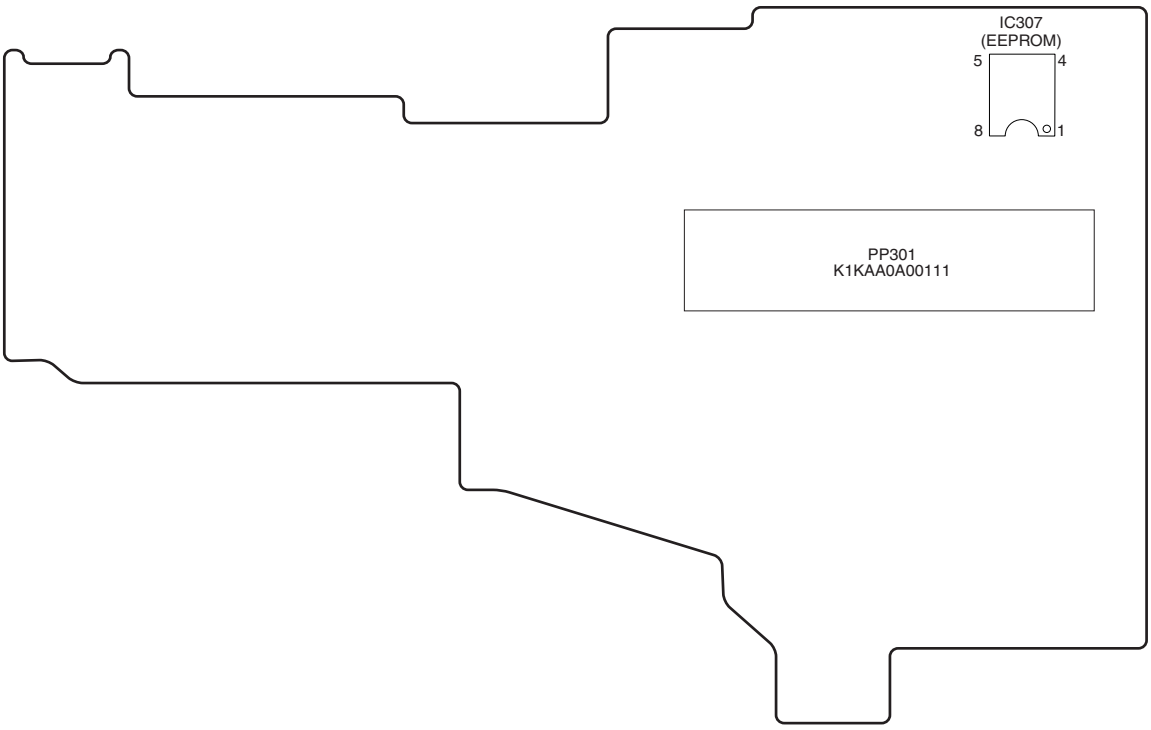
9.2.2. Sub P.C.B.



(COMPONENT SIDE)



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9.3. Electrical Adjustment Procedures

9.3.1. Computer assisted adjustment system <TATSUJIN> adjustment

This unit employs the computer assisted system named; “TATSUJIN PC-Adjustment” for Electrical adjustment.
It is required to install a USB driver for service which can be download only from TSN-WEB.

9.3.2. Set-up manual for DV-Camcorder.

Pay attention, because the adjustment method is different from this machine.

1. Save the software
   Install the effective model’s TATSUJIN Software to PC: Personal Computer.
2. Set-Up
   a. It need the connection between the PC and this unit with USB cable.
   b. Connect the PC and DV Camcoder as shown in Fig. E1 and E2.
   c. The adjustment instruction is available at “Software downlead” on the “Support Information from NWBG-PAVC” web-site in “TSN System”, together with maintenance software.

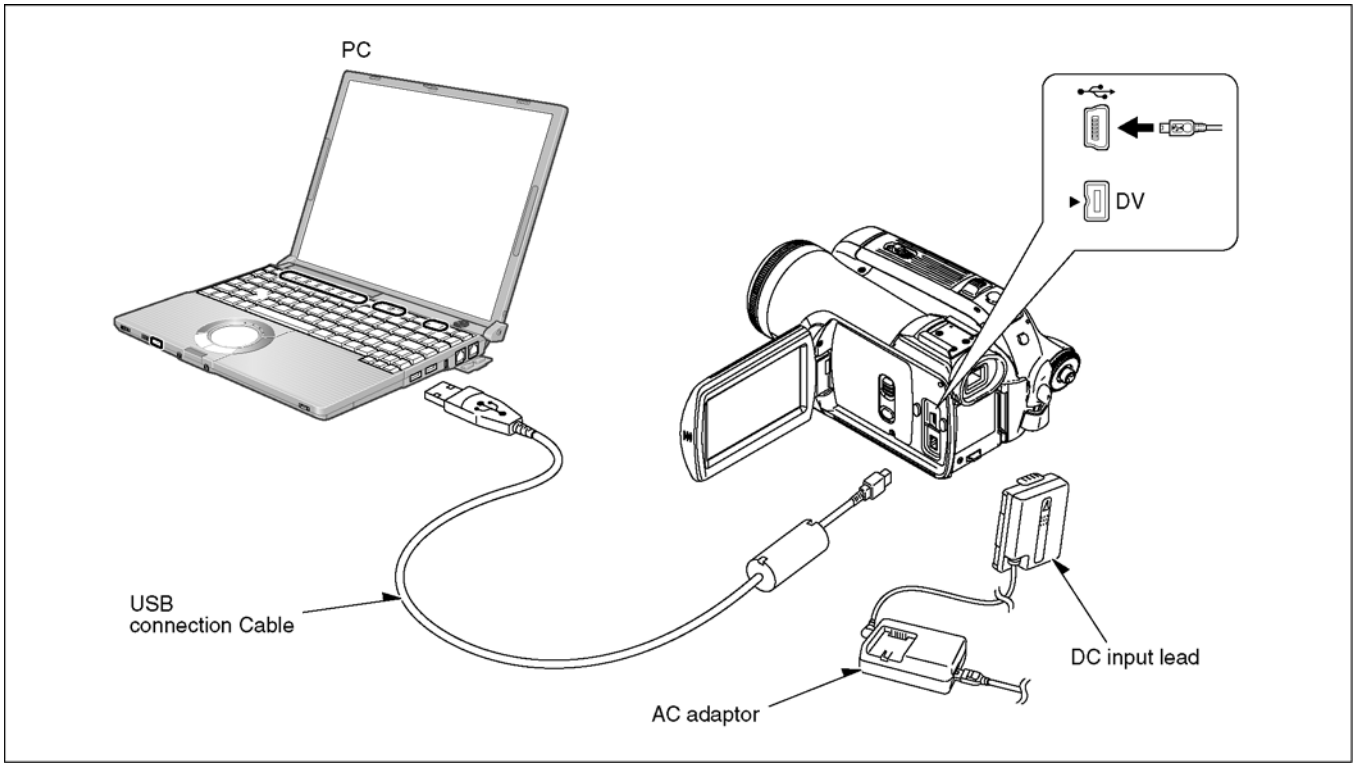

Fig. E1

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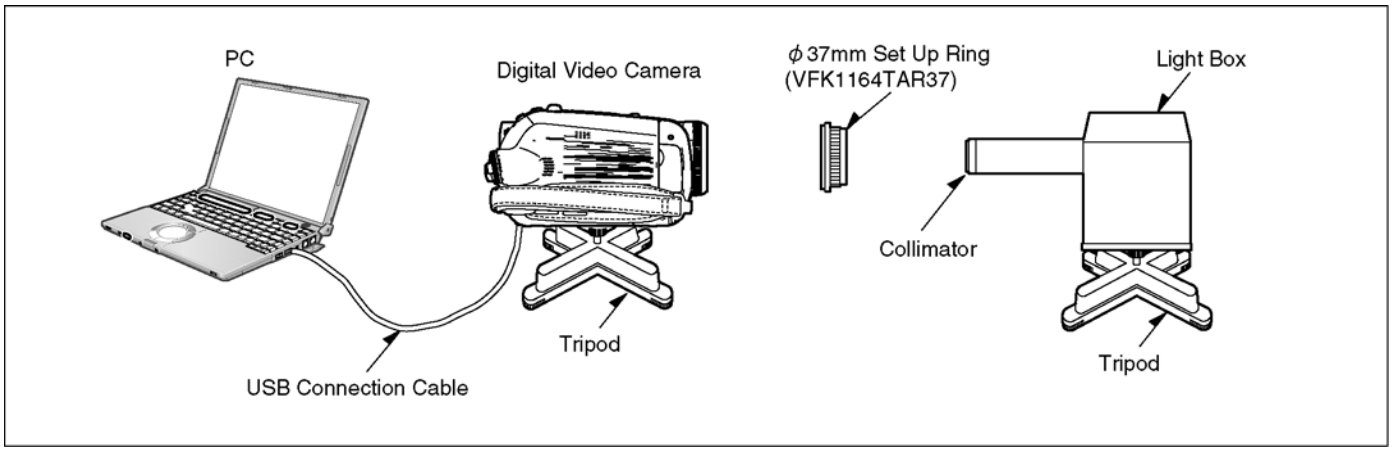

Fig. E2 Rough image of set-up connection

Ref	Name	Parts No.	Q'ty	Remarks
1	DV Camcorder	---	1	The Camcorder being adjusted.
2	Personnel Computer	---	1	With Tatsujin Software.
3	AC Adaptor	---	1	The AC Adaptor for DV Camcorder.
4	DC Output Cable	---	1	The AC Adaptor for DV Camcorder.
5	Step Up Ring	VFK1164TAR37	1	For Collimator 37mm
6	TATSUJIN PC-Adjustment Program	VF0D2003AV30	1	

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9.3.3. Set up PC-EVR adjustment program

1. Turn on the PC and install the TATSUJIN Adjustment Program into the PC.
2. TATSUJIN PC-Adjustment Program start in the following procedure.
   PC Menu : [Start] → [Program] → [win Tatsujin] → [DV Movie] → [NV-GS300 Series]

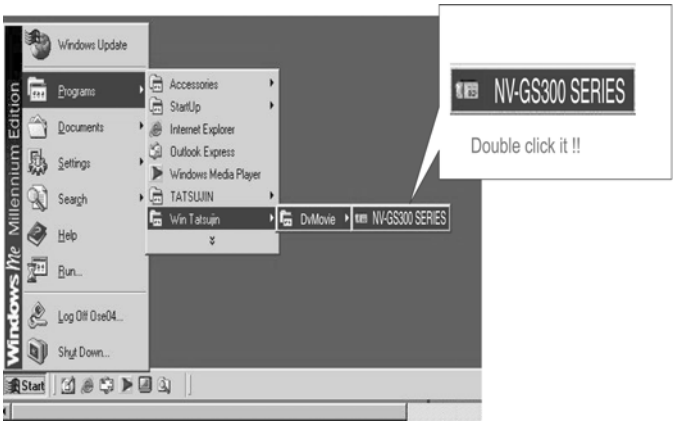

Fig. E3-1

   The main menu display will be displayed.
3. Select the desired model.
4. Turn on the camcorder. Then, click “Start.”

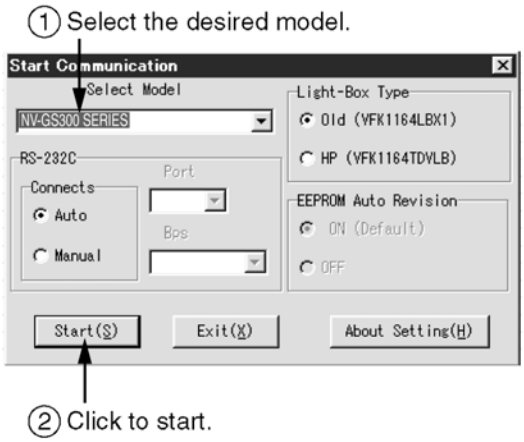

Fig. E3-2

5. The communication is complete, and the dialog will appear.
   Then, click “VCR (V) or Cam (C)” to save the EEPROM data,

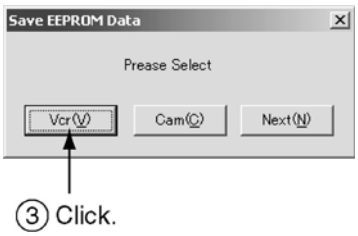

Fig. E3-3

6. Saving for EEPROM data is complete, menu will appear.
   To perform each adjustment, display the adjustment menu by selecting the desired menu from “Camera Adjust,” “Video Adjust,” “LCD Adjust” or “EVF Adjust” and select each adjustment item.

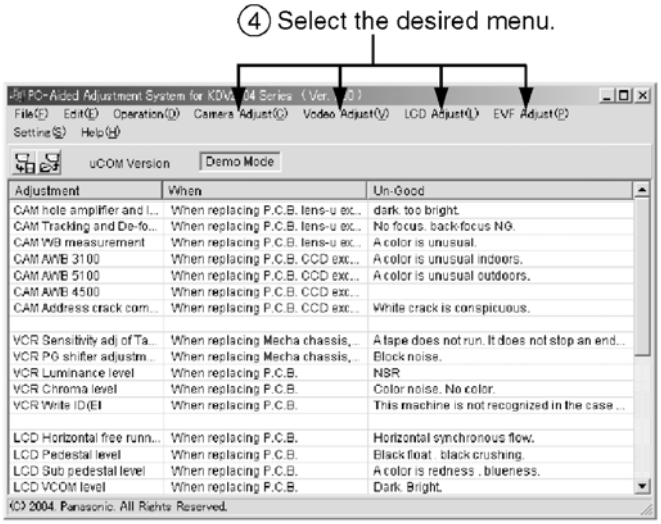

Fig. E3-4

Note:
The adjustment data is stored to the EEPROM IC after each adjustment.

7. After adjustment, to end the software, select “Exit” in File menu or close the window.

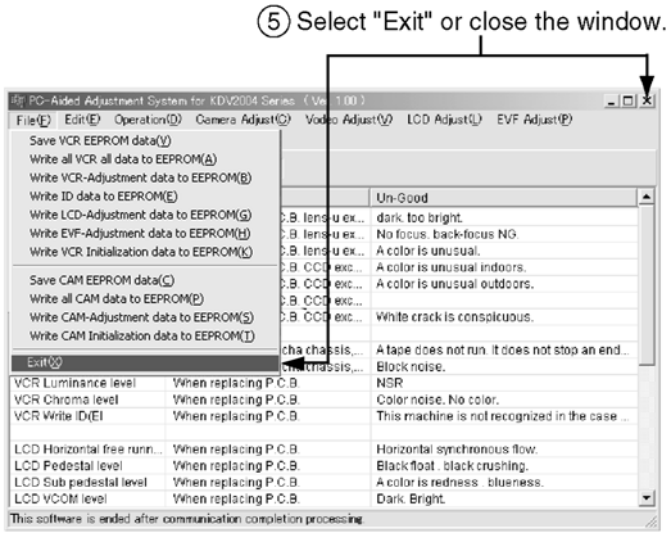
⑤ Select "Exit" or close the window.
File(F) Edit(E) Operation(O) Camera Adjust(C) Video Adjust(V) LCD Adjust(L) EVF Adjust(P)
Save VCR EEPROM data(V)
Write all VCR all data to EEPROM(A)
Write VCR-Adjustment data to EEPROM(B)
Write ID data to EEPROM(E)
Write LCD-Adjustment data to EEPROM(G)
Write EVF-Adjustment data to EEPROM(H)
Write VCR Initialization data to EEPROM(K)
Save CAM EEPROM data(C)
Write all CAM data to EEPROM(P)
Write CAM-Adjustment data to EEPROM(S)
Write CAM Initialization data to EEPROM(T)
Exit(X)
Un-Good
dark. too bright.
No focus. back-focus NG.
A color is unusual.
A color is unusual indoors.
A color is unusual outdoors.
White crack is conspicuous.
A tape does not run. It does not stop an end...
Block noise.
VCR Luminance level
When replacing P.C.B.
NSR
VCR Chroma level
Color noise. No color.
VCR Write ID(E)
This machine is not recognized in the case ...
LCD Horizontal free runn...
Horizontal synchronous flow.
LCD Pedestal level
Black float . black crushing.
LCD Sub pedestal level
A color is redness . blueness.
LCD VCOM level
Dark. Bright.
This software is ended after communication completion processing.

Fig. E3-5

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9.3.4. Initial guideline

The table below shows which adjustments are necessary according to the unit parts and individual parts to be replaced. Make sure to perform these adjustments shown below as necessary.

Adjustment Item \ Replacement Parts		Sub P.C.B.	Main P.C.B.	IC307 (EEPROM)	IC2006 (EEPROM)	Lens Unit	Prism Unit	Iris Unit	4th Lens Frame Unit	Cylinder Unit	Main Chassis Unit	LCD Panel	EVF P.C.B.	
Camera	CAM hole amplifier / Iris PWM	○		○		○	○	○						
	CAM Tracking and De-focus	○		○	○	○	○	○	○					
	CAM Revision CCD scratch	○		○			○							
	CAM ALC adjustment	○		○		○	○	○						
	CAM AWB adjustment	○		○			○							
Video	VCR Sensitivity ADJ. of Tape sensors		○		○						○			
	VCR PG shifter adjustment		○		○					○	○			
	VCR Luminance level		○		○									
	VCR Chroma level		○		○									
LCD	LCD Contrast		○		○							○		
	LCD Pedestal level		○		○							○		
	LCD PLL		○		○							○		
	LCD COM bias		○		○							○		
	LCD COM level		○		○							○		
	LCD White balance		○		○							○		
EVF	LED Rank Adjustment		○		○								○	

Note : ○ : Adjustment Item

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9.4. Mechanical Adjustment Procedures

9.4.1. Adjustment item

Item	Adjustment at the time of the part exchange		
	Half finished goods mechanism	Clyinder	Remarks
Linearlty adjustment & BER value confirmation	○	○	

9.4.2. Adjustment procedures

Pay attention, because the adjustment method is different from this machine.

lLinearlty adjustment & BER value confirmation

1. Remove the mechanism adjustment cover of this machine as shown in Fig. D1.
2. Remove the front case unit. (Refer to Disassembly Procedures.)
3. The enbelope detection spcial tool board (VFK1641) is connected to this machine as shown in Fig. D2 and D3.
   Note:
   Be careful not to damage when the Passive Probe is connectied to the connection terminal of Main P.C.B..
   It exists the possibility of the damage.
4. The enbelope detection spcial tool board is connected to oscilloscope as shown in Fig. D2 and D3.
   Connect the AV Jack of this machine and the oscilloscope by using the Multi cable.
5. The post is adjusted with the post driver(VFK1899) so that recycles the normal tape which recorded NTSC signal and the detection wave-link become a flat as shown in Fig. D4.
   *At the time of the clyinder unit exchange unnecessary.
6. The post is adjusted with the post driver so that recycles a alignment tape(VFM3110EDS) and the detection wave-link become a flat once again.
7. Recycling the tape that video-taped it wirh this machine after adjustment, the BER value is confirmed withthe item of the BER the item of the BER confirmation of expert soft inside.

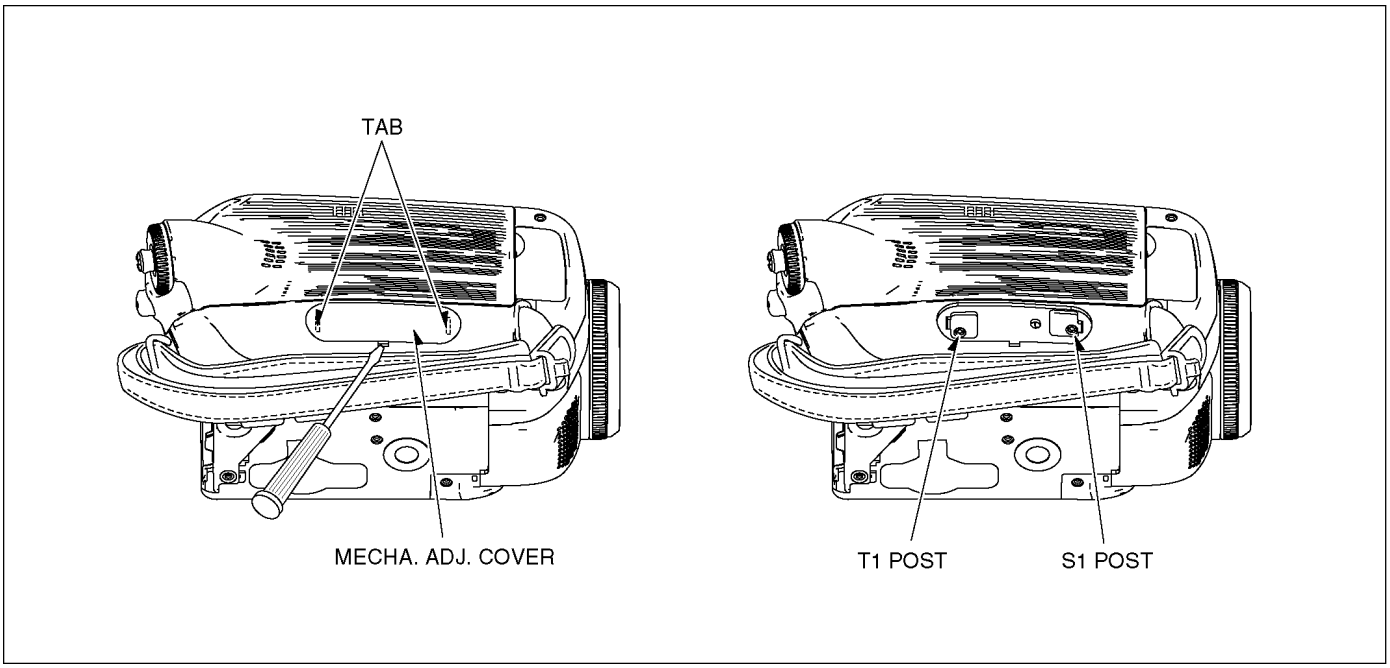

Fig. D1

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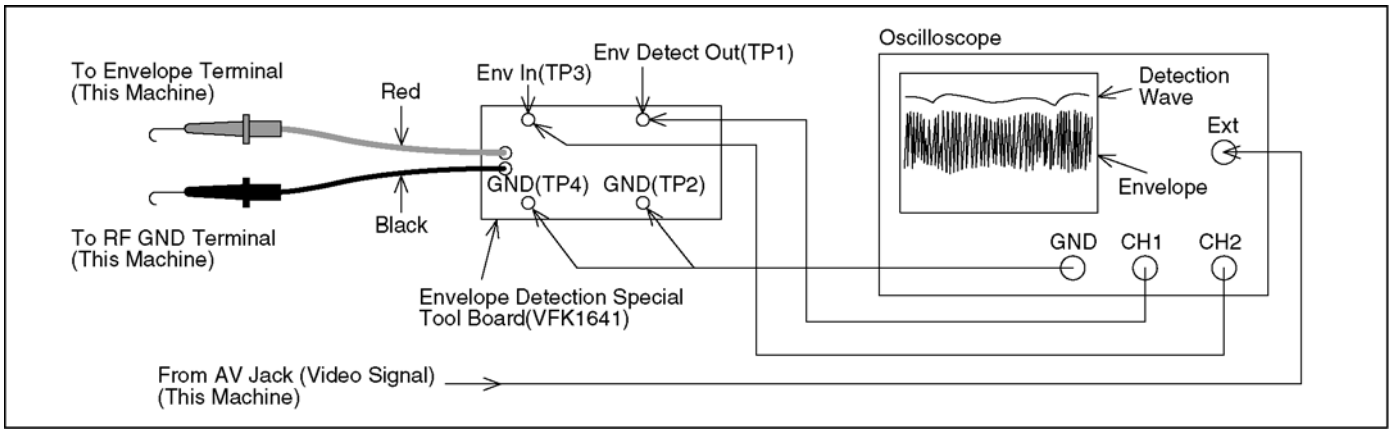

Fig. D2

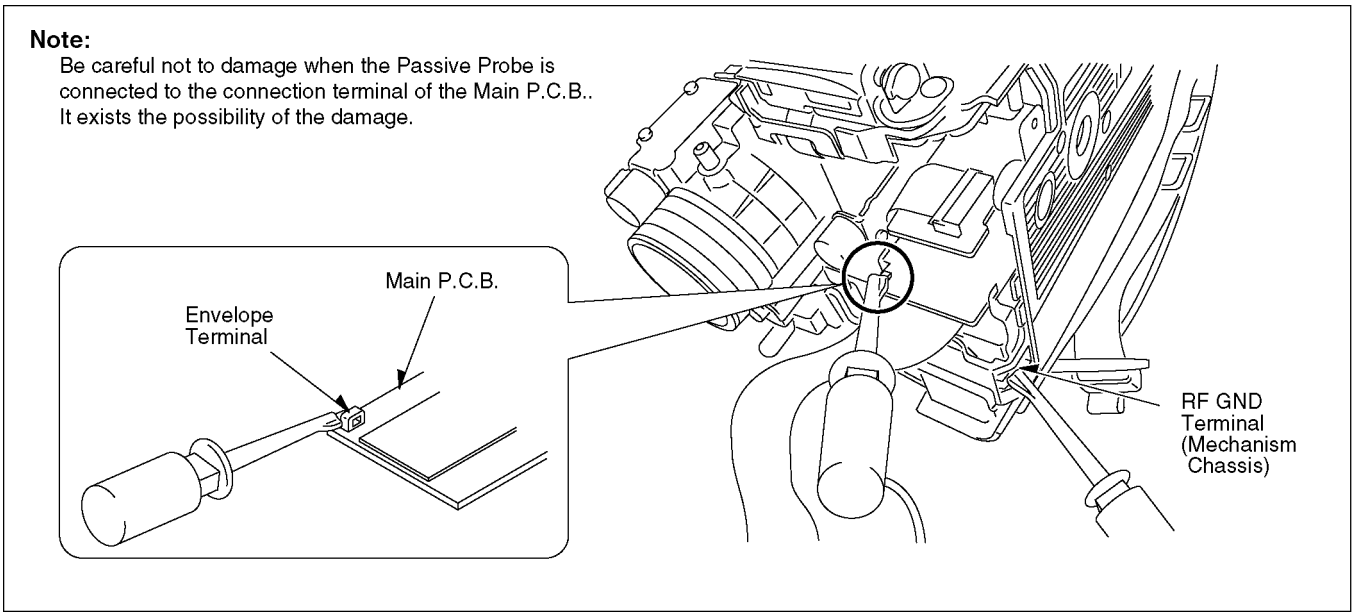

Fig. D3

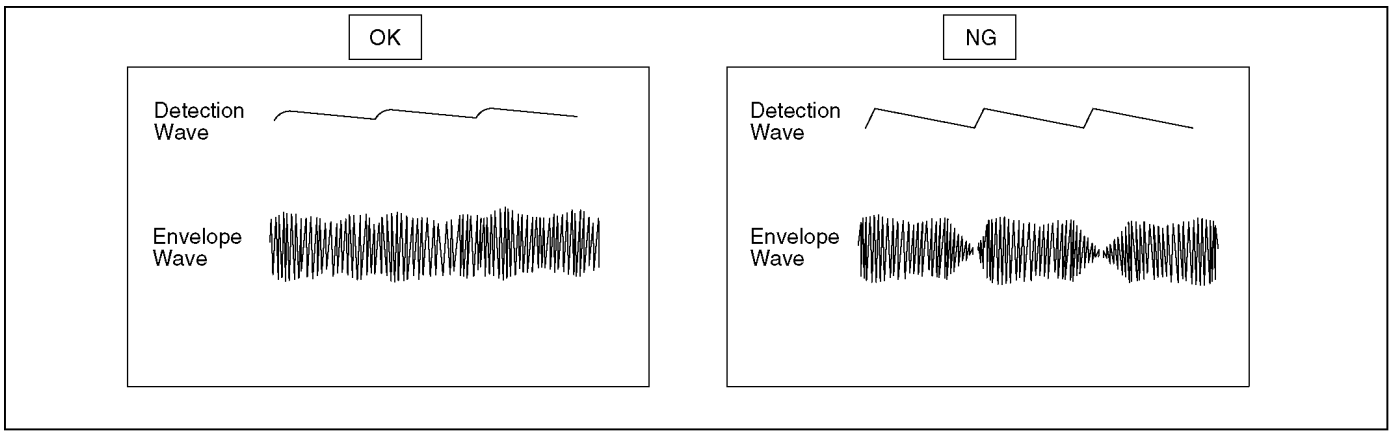

Fig. D4

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10 Maintenace

10.1. Cleaning Lens, Viewfinder and LCD Panel

Do not touch the surface of lens, Viewfinder and LCD Panel with your hand.
When cleaning the lens, use air-Blower to blow off the dust.
When cleaning the LCD Panel, dampen the lens cleaning paper with lens cleaner, and the gently wipe the their surface.

Note:

A lens cleaning paper and lens cleaner are available at local camera shops and market place.

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VM0512045CE

Service Manual

Diagrams and Replacement Parts List

Digital Video Camera

NV-GS300EG	NV-GS300GN	NV-GS280EG
NV-GS300EB	NV-GS300SG	NV-GS280EP
NV-GS300EP	NV-GS300PL	NV-GS280E
NV-GS300EE	NV-GS300GD	
NV-GS300E	NV-GS300GT	
NV-GS300GC	NV-GS308GK	
NV-GS300GCT	NV-GS280EB	

Vol. 1
Colour
(S).....Silver Type

S1. About Indication of The Schematic Diagram

S1.1. Important Safety Notice

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

1.Although reference number of the parts is indicated on the P.C.B. drawing and/or schematic diagrams, it is NOT mounted on the P.C.B. when it is displayed with "$" mark.

2.It is only the "Test Round" and no terminal (Pin) is available on the P.C.B. when the TP (Test Point) indicated as "●" mark.

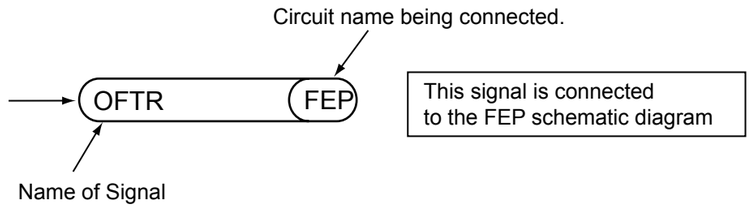
3.The voltage being indicated on the schematic diagram is measured in "Standard-Playback" mode when there is no specify mode is mentioned.

4.Although the voltage and waveform available on here is measured with standard frame, it may be differ from actual measurement due to modification of circuit and so on.

5.The voltage being indicated here may be include observational-error (deviation) due to internal-resistance and/or reactance of equipment. Therefore, handle the value indicated on here as reference.

6.Use the parts number indicated on the Replacement Parts List .

7.Indication on Schematic diagrams:



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S2. Voltage and Waveform Chart

Note) Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

S2.1. Side-R P.C.B.

REF No.	PIN No.	REC	PB	EE
IC601	1	1.2	1.2	1.2
IC601	2	0	0	0
IC601	3	0	0	0
IC601	4	2.8	2.8	2.8
IC601	5	0	0	0
IC601	6	2.8	2.8	2.8
IC601	7	2.8	2.8	2.8
IC601	8	2.8	2.8	2.8
IC601	9	2.8	2.8	2.8
IC601	10	0	0	0
IC601	11	0.9	0.9	0.9
IC601	12	-	-	-
IC601	13	-	-	-
IC601	14	0.3	0.3	0.3
IC601	15	0.2	0.2	0.2
IC601	16	0.3	0.3	0.3
IC601	17	0	0	0
IC601	18	0.2	0.2	0.2
IC601	19	0.3	0.3	0.3
IC601	20	0.3	0.3	0.3
IC601	21	0.3	0.3	0.3
IC601	22	0.3	0.3	0.3
IC601	23	1.8	1.8	1.8
IC601	24	4.8	4.8	4.8
IC601	25	2.5	2.5	2.5
IC601	26	2.5	2.5	2.5
IC601	27	2.5	2.5	2.5
IC601	28	0	0	0
IC601	29	4.5	4.5	4.5
IC601	30	4.3	4.3	4.3
IC601	31	0.7	0.7	0.7
IC601	32	0.4	0.4	0.4
IC601	33	4.8	4.8	4.8
IC601	34	4	4	4
IC601	35	2.2	2.2	2.2
IC601	36	2.6	2.6	2.6
IC601	37	0	0	0
IC601	38	2.8	2.8	2.8
IC601	39	-	-	-
IC601	40	2.8	2.8	2.8
IC601	41	-	-	-
IC601	42	-	-	-
IC601	43	0	0	0
IC601	44	0	0	0
IC601	45	2.8	2.8	2.8
IC601	46	2.8	2.8	2.8
IC601	47	1.4	1.4	1.4
IC601	48	1.3	1.3	1.3
IC601	49	0	0	0
IC601	50	0	0	0
IC601	51	1.4	1.4	1.4
IC601	52	2.8	2.8	2.8
IC601	53	0	0	0
IC601	54	0.1	0.1	0.1
IC601	55	0.1	0.1	0.1
IC601	56	2.8	2.8	2.8
IC601	57	1.4	1.4	1.4
IC601	58	1.4	1.4	1.4
IC601	59	0.1	0.1	0.1
IC601	60	0	0	0
IC601	61	2.2	2.2	2.2
IC601	62	2.2	2.2	2.2
IC601	63	0	0	0
IC601	64	1.2	1.2	1.2

<IC601>

S2.2. EVF P.C.B.

REF No.	PIN No.	REC	PB	EE
Q801	E	0.6	0.6	0.6
Q801	C	1.7	1.7	1.7
Q801	B	1.3	1.3	1.3

S2.3. Front P.C.B.

REF No.	PIN No.	REC	PB	EE
IC481	1	1.3	1.3	1.3
IC481	2	0	0	0
IC481	3	2.9	2.9	2.9
IC481	4	1.2	1.2	1.2
IC482	1	1.3	1.3	1.3
IC482	2	0	0	0
IC482	3	2.9	2.9	2.9
IC482	4	1.2	1.2	1.2
IC4801	1	2.4	2.4	2.4
IC4801	2	2.4	2.4	2.4
IC4801	3	2.4	2.4	2.4
IC4801	4	0	0	0
IC4801	5	2.4	2.4	2.4
IC4801	6	2.4	2.4	2.4
IC4801	7	2.4	2.4	2.4
IC4801	8	4.9	4.9	4.9
IC6701	1	4.2	4.2	4.2
IC6701	2	0	0	0
IC6701	3	4.9	4.9	4.9
IC6701	4	4.9	4.9	4.9
IC6701	5	4.8	4.8	4.8
IC6702	1	4.8	4.8	4.8
IC6702	2	0	0	0
IC6702	3	0	0	0
IC6702	4	0	0	0
IC6702	5	-	-	-
IC6702	6	0	0	0
IC6702	7	0	0	0
IC6702	8	0	0	0
IC7003	1	0	0	0
IC7003	2	0	0	0
IC7003	3	0	0	0
IC7003	4	0	0	0
IC7003	5	258	246	247
IC7003	6	258	246	247
IC7003	7	258	246	247
IC7003	8	258	246	247
Q491	E	3.7	3.7	3.7
Q491	C	4.9	4.9	4.9
Q491	B	3.4	3.4	3.4
Q492	E	3.2	3.2	3.2
Q492	C	4.9	4.9	4.9
Q492	B	3.7	3.7	3.7
Q4803	E	4.2	4.2	4.2
Q4803	C	4.9	4.9	4.9
Q4803	B	4.8	4.8	4.8
Q4901	E	0	0	0
Q4901	C	0	0	0
Q4901	B	0	0	0
Q4902	E	0	0	0
Q4902	C	0	0	0
Q4902	B	0	0	0

REF No.	PIN No.	REC	PB	EE
Q4903	E	0	0	0
Q4903	C	0	0	0
Q4903	B	0	0	0
Q4904	E	0	0	0
Q4904	C	0	0	0
Q4904	B	0	0	0
Q4907	E	0	0	0
Q4907	C	0	0	0
Q4907	B	0	0	0
Q4908	E	0	0	0
Q4908	C	0	0	0
Q4908	B	0	0	0
Q6701	E	4.9	4.9	4.9
Q6701	C	4.8	4.8	4.8
Q6701	B	4.2	4.2	4.2
Q7001	E	0	0	0
Q7001	C	0	0	0
Q7001	B	0.7	0.7	0.7
Q7002	E	0	0	0
Q7002	C	7.9	7.9	7.9
Q7002	B	0	0	0
Q7003	E	0	0	0
Q7003	C	0	0	0
Q7003	B	0.6	0.6	0.6
Q7004	1	0	0	0
Q7004	2	4.8	4.8	4.8
Q7004	3	0	0	0
Q7004	4	4.9	4.9	4.9
Q7004	5	4.8	4.8	4.8
Q7004	6	0	0	0
QR4901	E	4.8	4.8	4.8
QR4901	C	0	0	0
QR4901	B	4.8	4.8	4.8
QR6701	E	0	0	0
QR6701	C	2.8	2.8	2.8
QR6701	B	0	0	0
QR6702	E	0	0	0
QR6702	C	2.8	2.8	2.8
QR6702	B	0	0	0
QR6703	E	2.9	2.9	2.9
QR6703	C	0	0	0
QR6703	B	2.8	2.8	2.8
QR7001	E	0	0	0
QR7001	C	4.8	4.8	4.8
QR7001	B	0	0	0
QR7008	E	0	0	0
QR7008	C	0.7	0.7	0.7
QR7008	B	0	0	0

S2.4. Monitor P.C.B.

REF No.	PIN No.	REC	PB	EE
Q901	E	1.5	1.5	1.5
Q901	C	0	0	0
Q901	B	1	1	1
Q902	E	0.3	0.3	0.3
Q902	C	1.4	1.4	1.4
Q902	B	1.1	1.1	1.1
Q903	E	0.3	0.3	0.3
Q903	C	1.4	1.4	1.4
Q903	B	1.1	1.1	1.1
Q904	E	0.3	0.3	0.3
Q904	C	1.4	1.4	1.4
Q904	B	1.1	1.1	1.1
Q905	E	0	0	0
Q905	C	0	0	0
Q905	B	0	0	0
Q906	E	0.3	0.3	0.3
Q906	C	1.4	1.4	1.4
Q906	B	1.1	1.1	1.1
Q907	E	0.3	0.3	0.3
Q907	C	1.4	1.4	1.4
Q907	B	1.1	1.1	1.1
Q908	E	0.3	0.3	0.3
Q908	C	1.4	1.4	1.4
Q908	B	1.1	1.1	1.1
Q913	E	0.3	0.3	0.3
Q913	C	1.4	1.4	1.4
Q913	B	1.1	1.1	1.1

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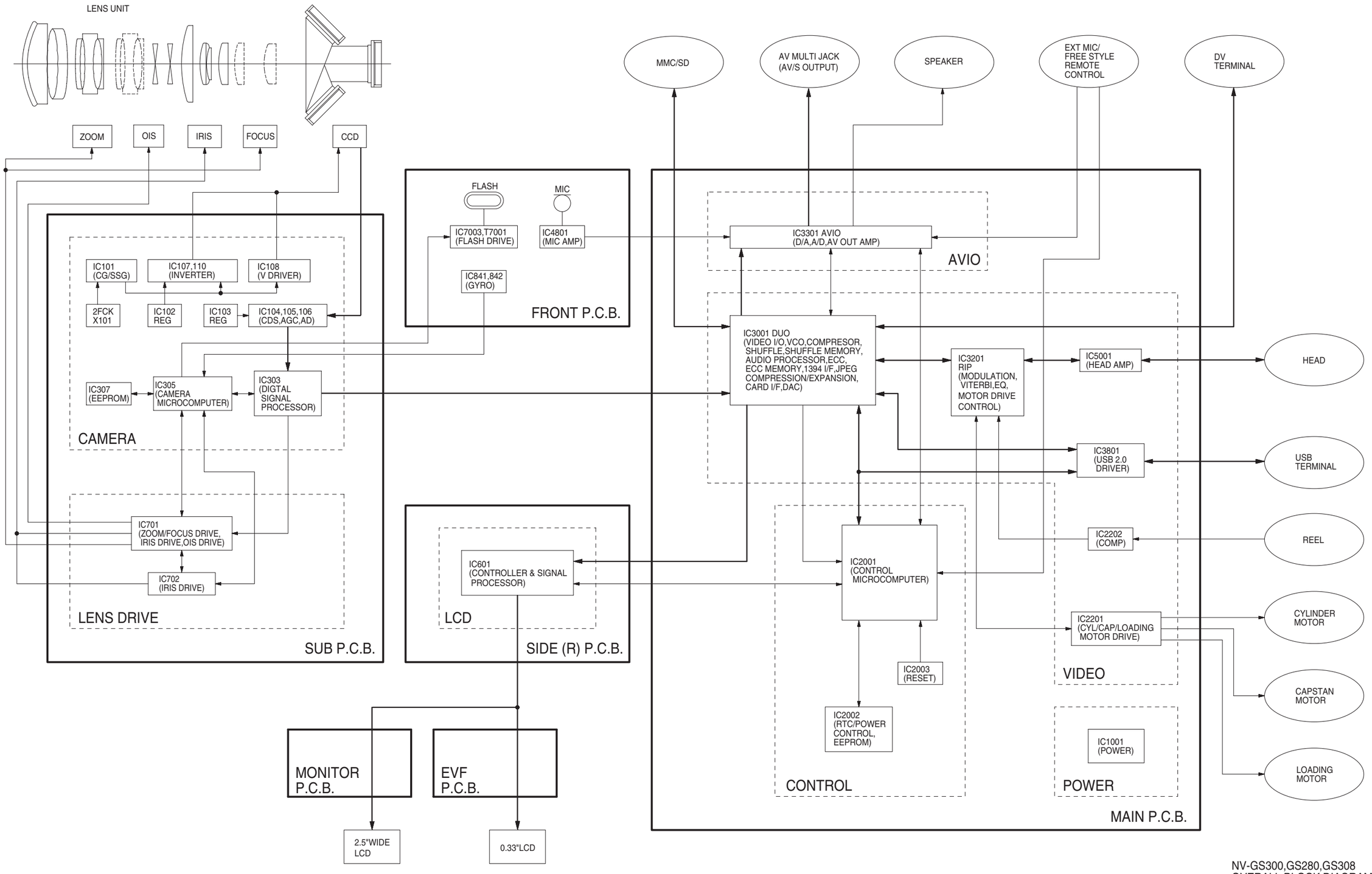
S3. Block Diagram

S3.1. Overall Block Diagram



NV-GS300,GS280,GS308
OVERALL BLOCK DIAGRAM

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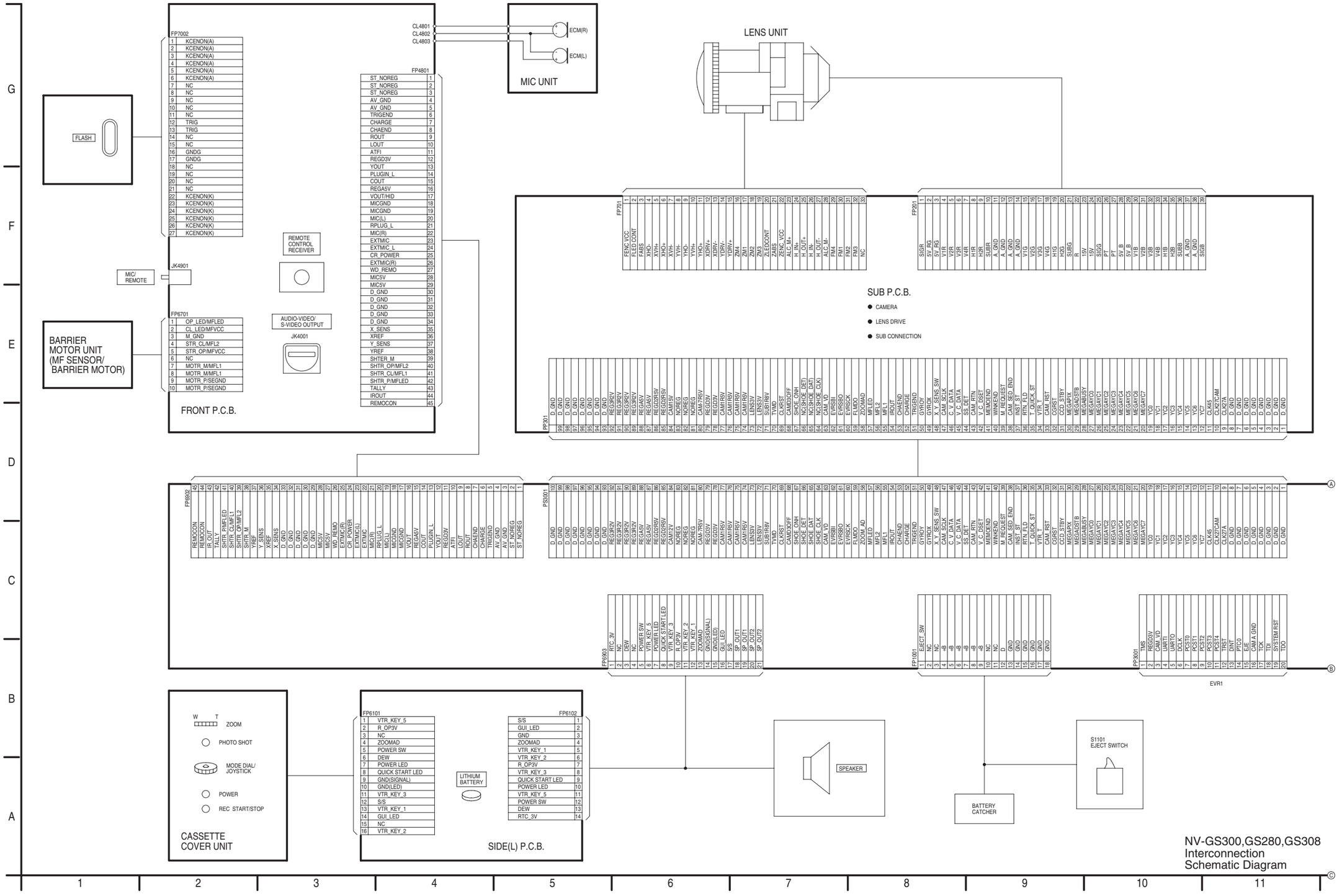
S4. Schematic Diagram

S4.1. Interconnection Diagram

S4.1.1. Interconnection Diagram (1)



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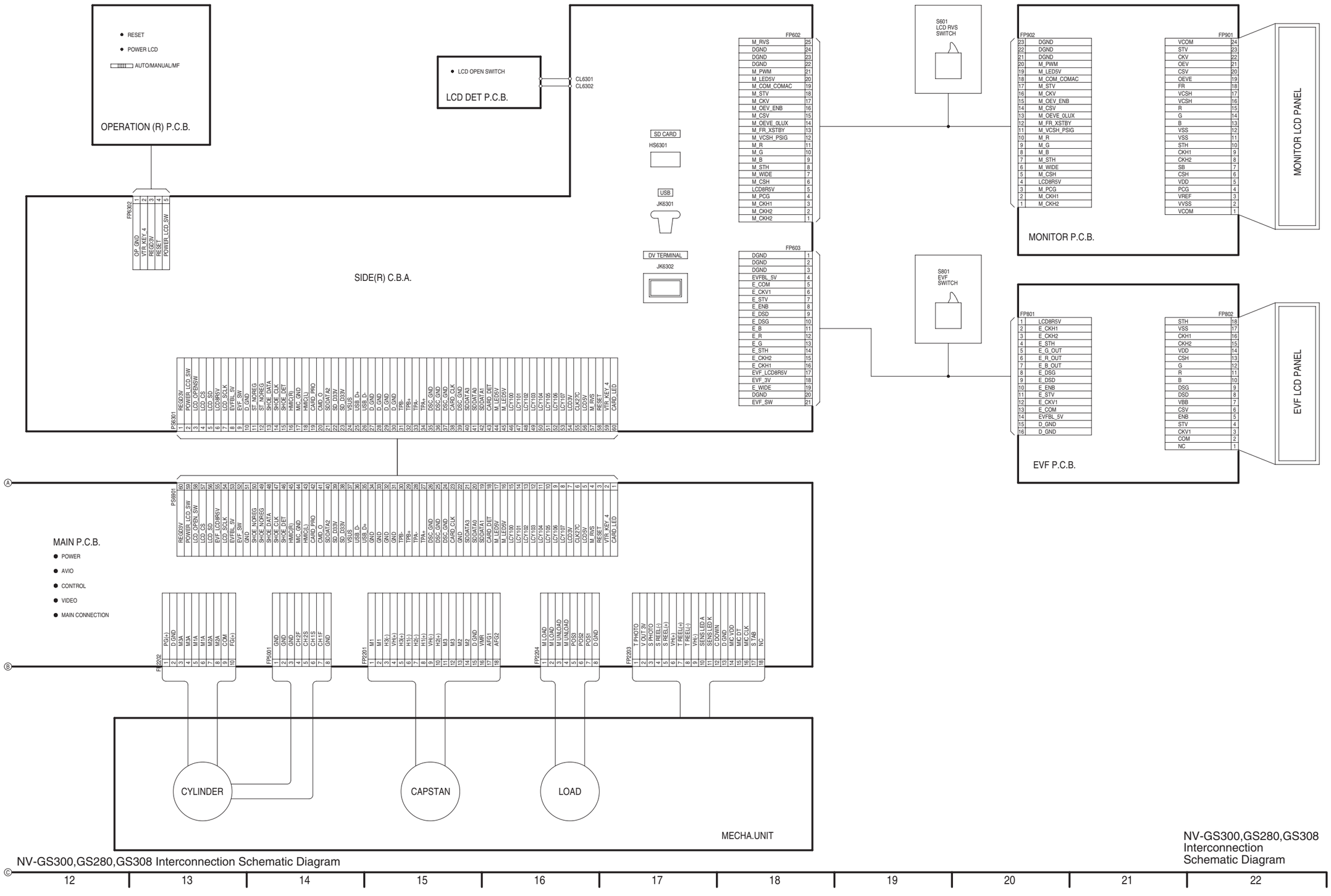
S4.1.2. Interconnection Diagram (2)



NV-GS300,GS280,GS308 Interconnection Schematic Diagram

NV-GS300,GS280,GS308
Interconnection
Schematic Diagram

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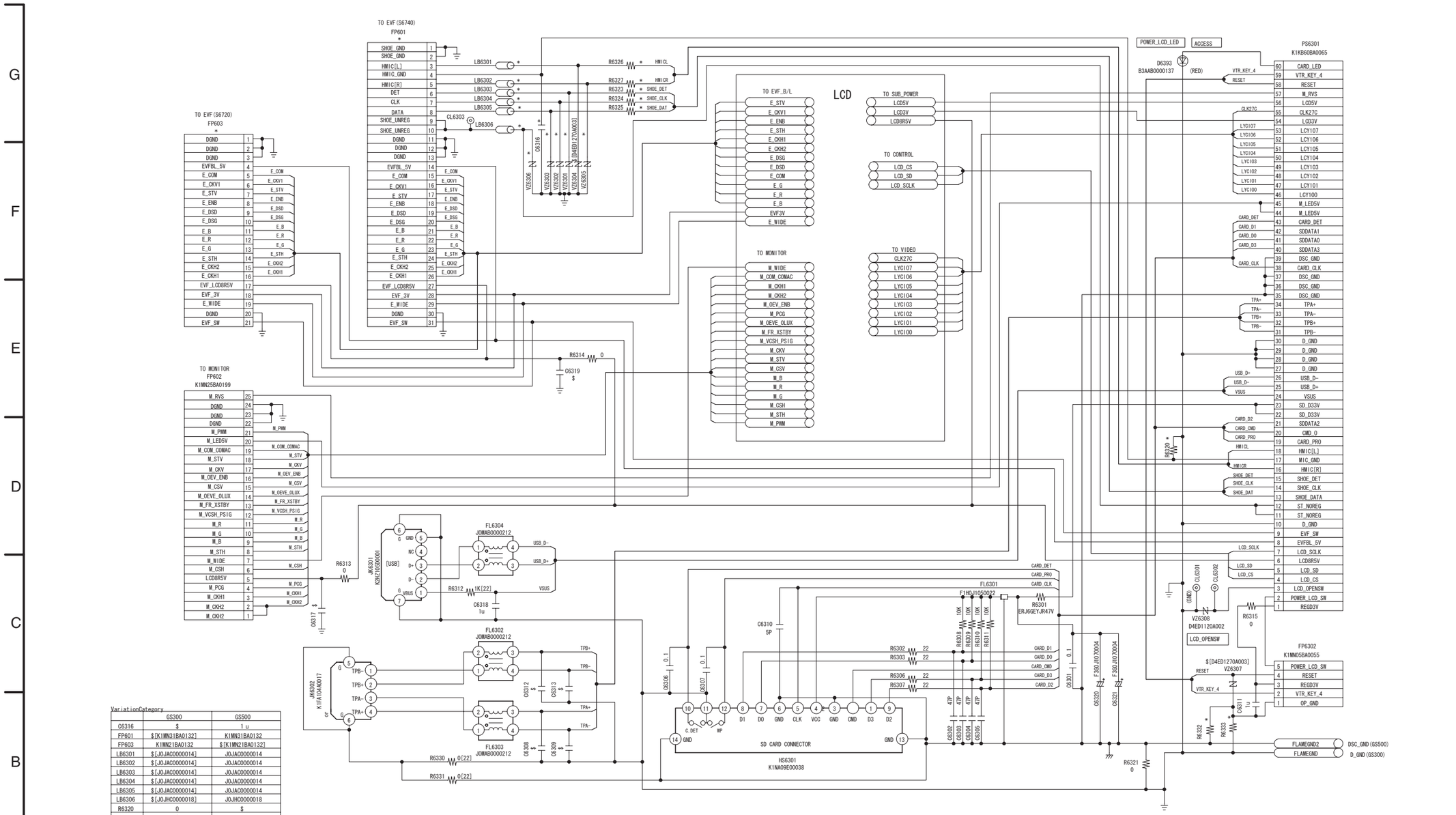
S4.2. Side-R Schematic Diagram



VariationCategory	GS300	GS500
C6316	$	1 u
FP601	$[K1MN31BA0132]	K1MN31BA0132
FP603	K1MN21BA0132	$[K1MN21BA0132]
LB6301	$[J0JAC0000014]	J0JAC0000014
LB6302	$[J0JAC0000014]	J0JAC0000014
LB6303	$[J0JAC0000014]	J0JAC0000014
LB6304	$[J0JAC0000014]	J0JAC0000014
LB6305	$[J0JAC0000014]	J0JAC0000014
LB6306	$[J0JHC0000018]	J0JHC0000018
R6320	0	$
R6323	$	100
R6324	$	100
R6325	$	100
R6326	$	100
R6327	$	100
R6332	$[18]	0[18]
R6333	0[18]	$[18]
VZ6301	$[D4ED1270A006]	D4ED1270A006
VZ6302	$[D4ED1270A006]	D4ED1270A006
VZ6303	$[D4ED1270A006]	D4ED1270A006
VZ6305	$[D4ED1120A002]	D4ED1120A002
VZ6306	$[D4ED1120A002]	D4ED1120A002

NV-GS300/GS308/GS280 Series
Side-R Section
(Side-R P.C.B. (1/2))
Schematic Diagram

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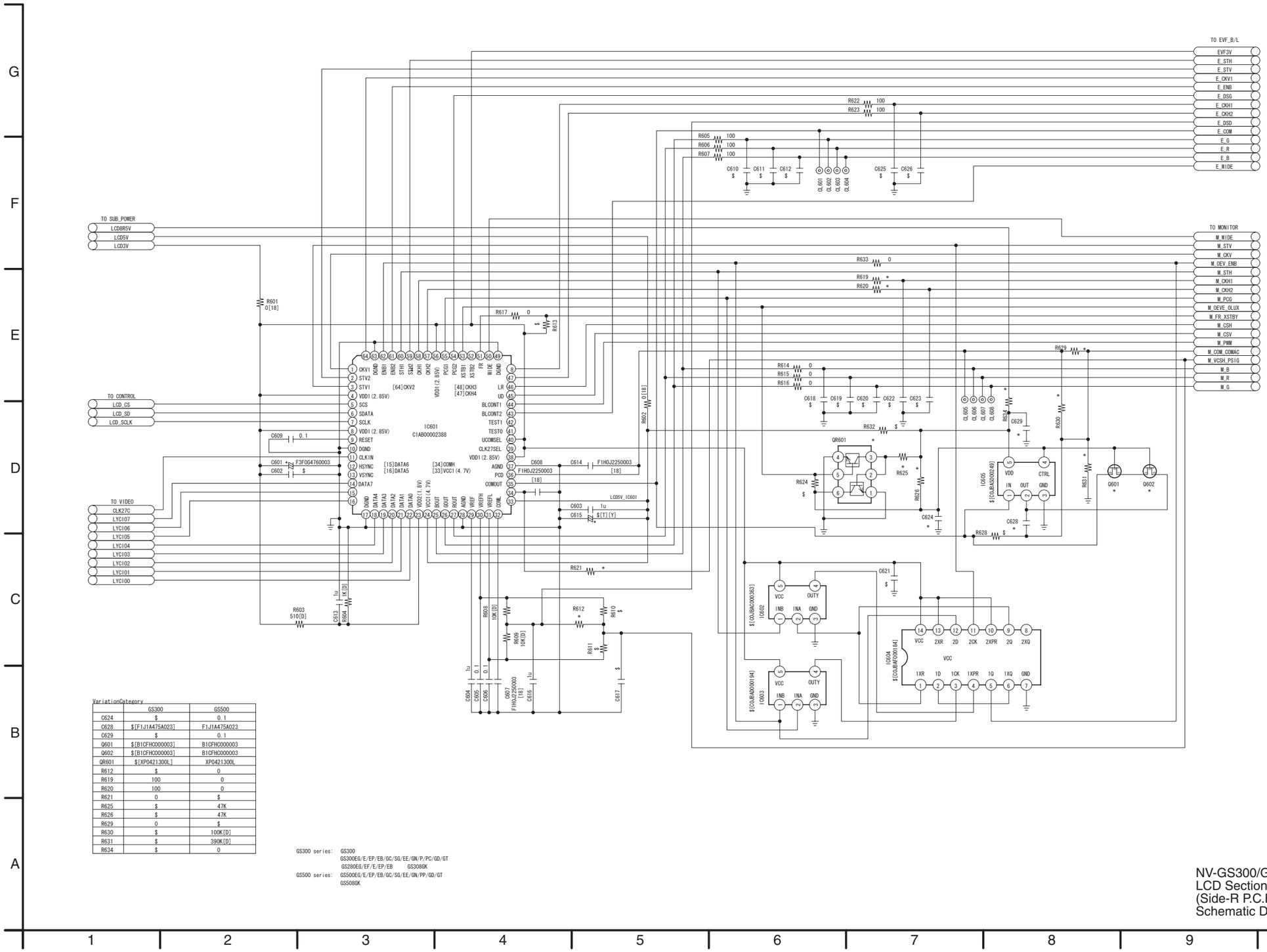
S4.3. LCD Schematic Diagram



VariationCategory

	GS300	GS500
C624	$	0.1
C628	$[F1J1A475A023]	F1J1A475A023
C629	$	0.1
Q601	$[B1CFHC0000003]	B1CFHC0000003
Q602	$[B1CFHC0000003]	B1CFHC0000003
QR601	$[XP0421300L]	XP0421300L
R612	$	0
R619	100	0
R620	100	0
R621	0	$
R625	$	47K
R626	$	47K
R629	0	$
R630	$	100K[D]
R631	$	390K[D]
R634	$	0

GS300 series: GS300
GS300EG/E/EP/EB/GC/SG/EE/GN/P/PC/GD/GT
GS280EG/EF/E/EP/EB GS308GK
GS500 series: GS500EG/E/EP/EB/GC/SG/EE/GN/PP/GD/GT
GS508GK

NV-GS300/GS308/GS280 Series
LCD Section
(Side-R P.C.B. (2/2))
Schematic Diagram

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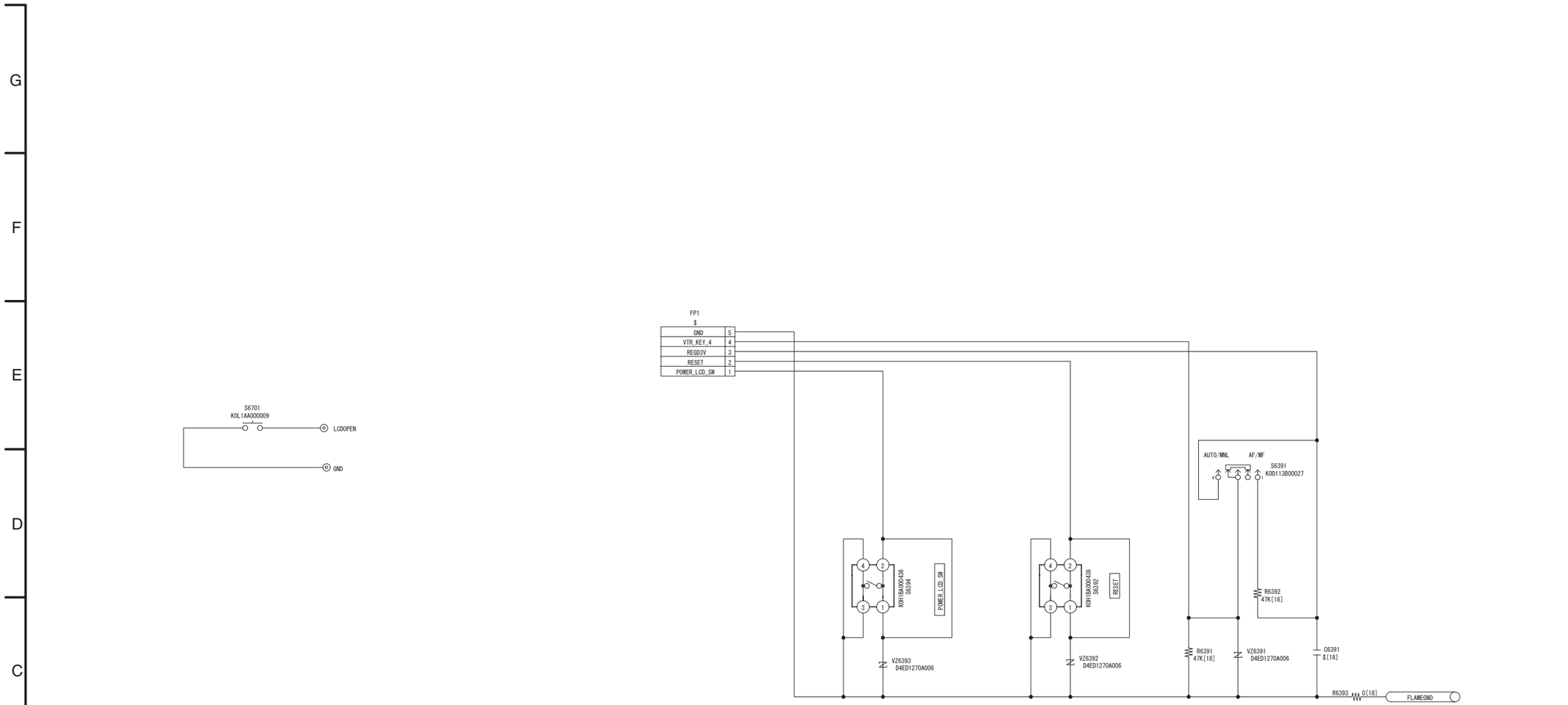
S4.4. LCD Det Schematic Diagram / S4.5. Operation (R) Schematic Diagram



NV-GS300/GS308/GS280 Series
LCD Det
Schematic Diagram

NV-GS300/GS308/GS280 Series
Operation (R)
Schematic Diagram

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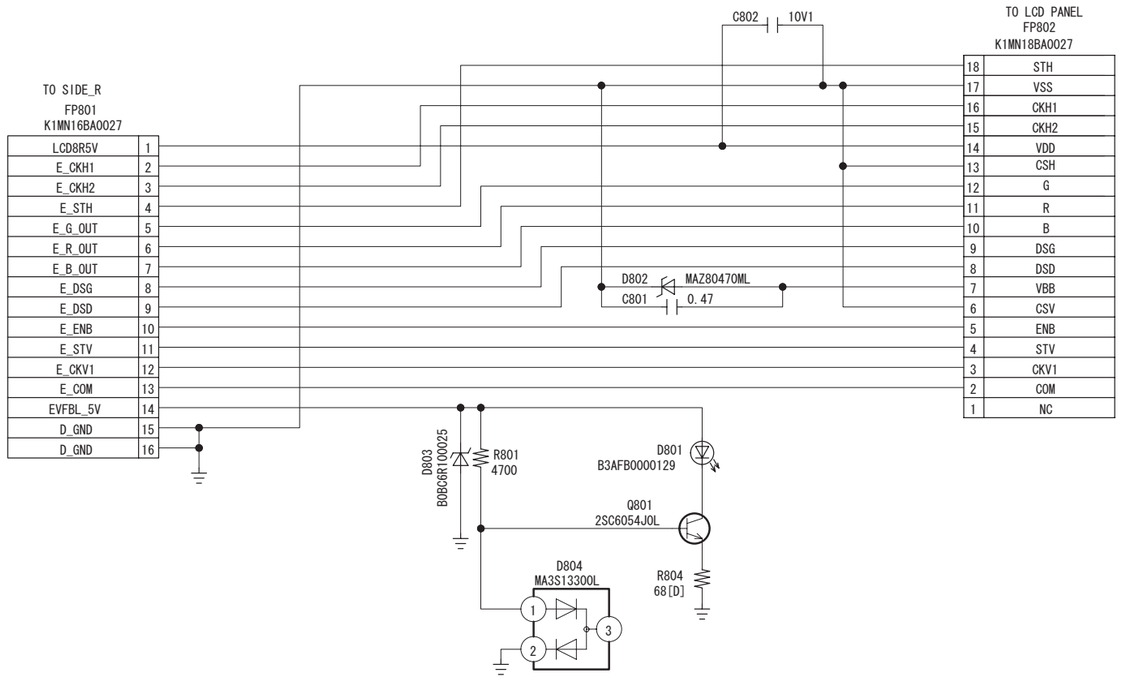
S4.6. EVF Schematic Diagram



NV-GS300/GS308/GS280 Series
EVF
Schematic Diagram

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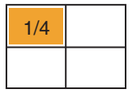
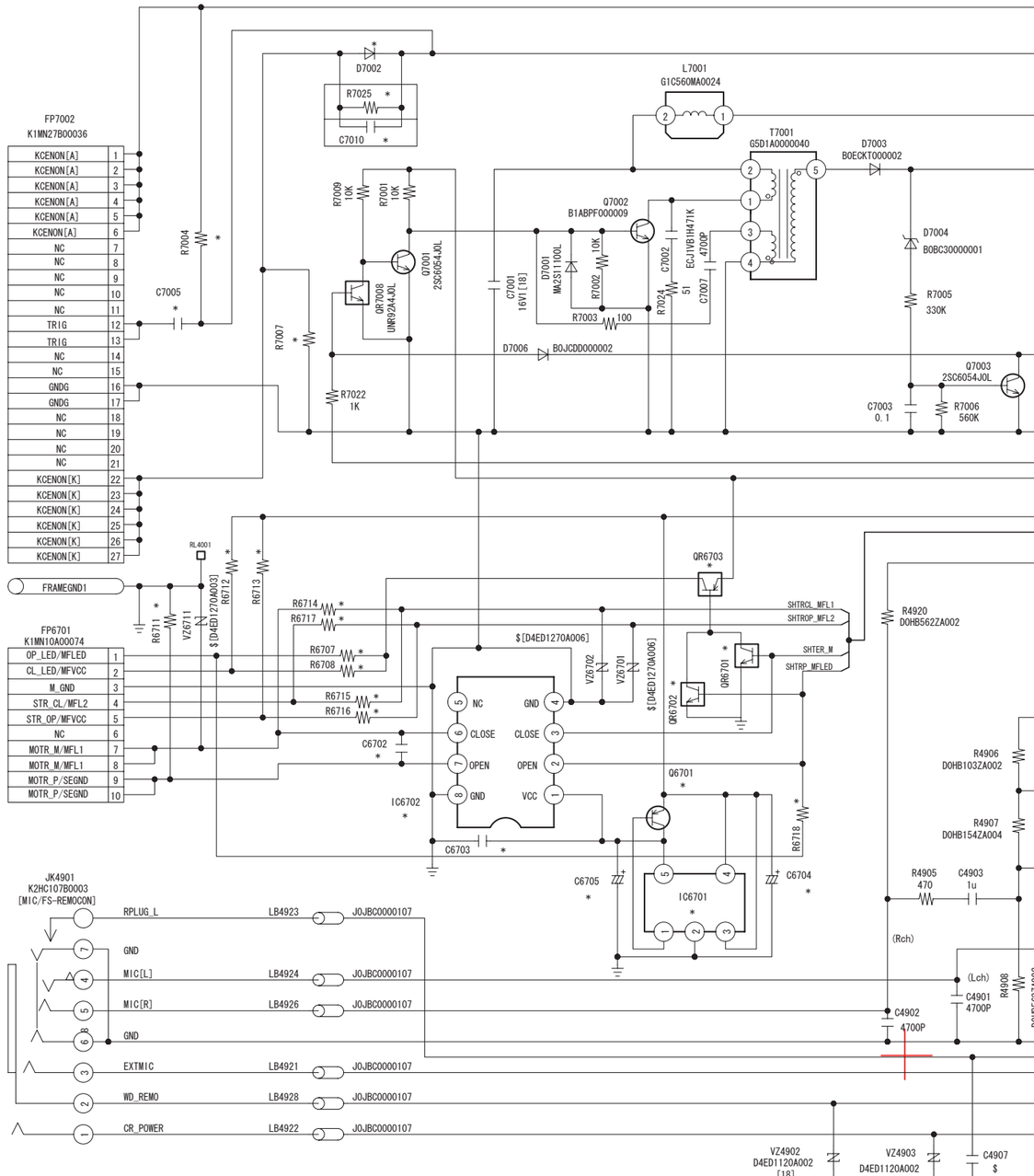
S4.7. Front Schematic Diagram



NV-GS300/GS308/GS280 Series
Front
Schematic Diagram



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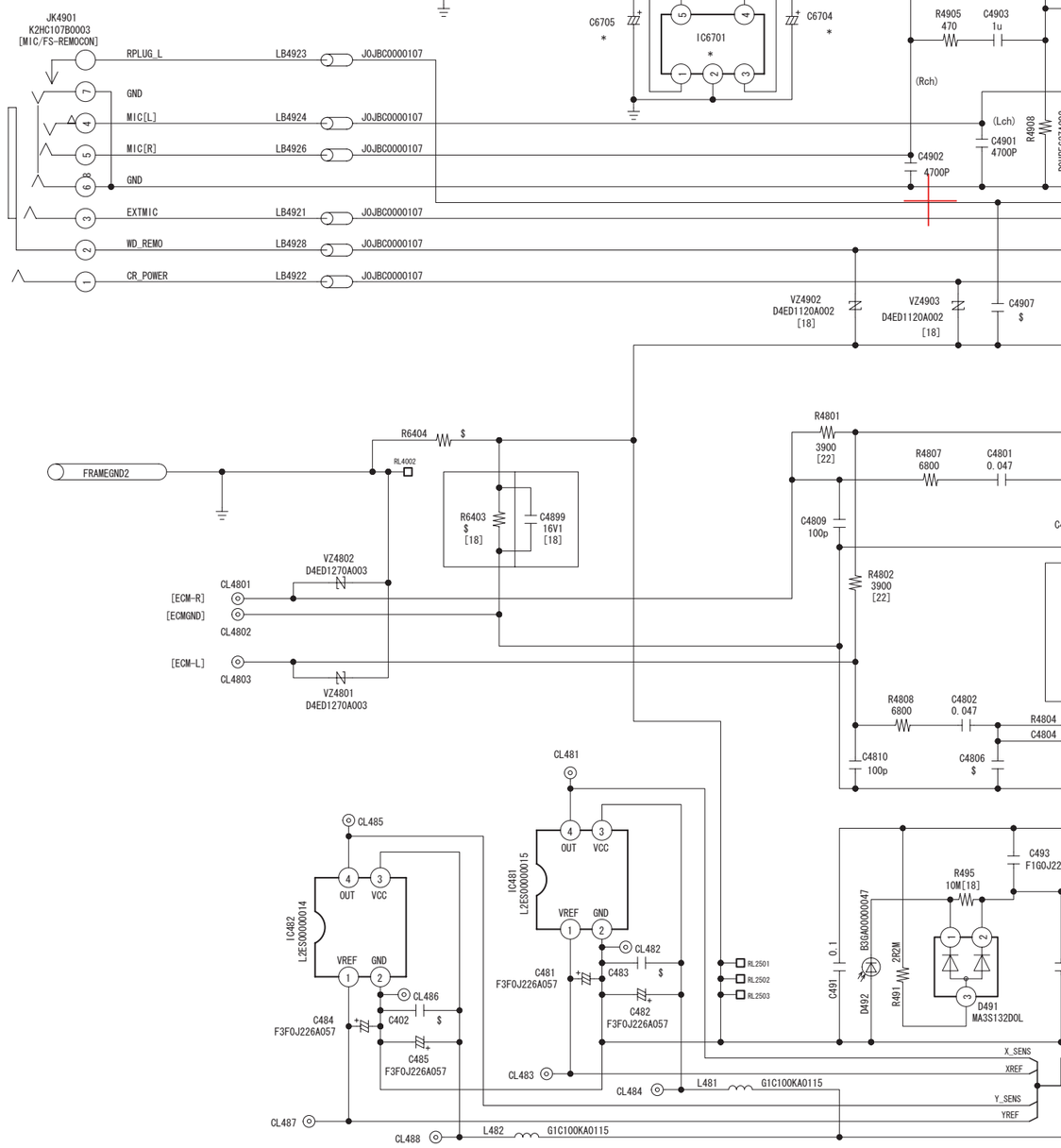

VariationCategory

	GS300	GS500
C6702	0.1	$
C6703	0.1	$
C6704	F3F0J106A057	$[F3F0J106A057]
C6705	F3F0J226A057	$[F3F0J226A057]
C7005	F1K2E4730002	$
C7010	F1K2E223A004	$
D7002	B0ECKP000024	$
IC6701	C0DBZGZ00046	$[C0DBZGZ00046]
IC6702	C0GBF0000024	$[C0GBF0000024]
Q6701	B1BDBC000005	$[B1BDBC000005]
QR6701	UNR92A3J0JL	$[UNR92A3J0JL]
QR6702	UNR92A3J0JL	$[UNR92A3J0JL]
QR6703	UNR91A5J0JL	$[UNR91A5J0JL]
R6707	180	$
R6708	180	$
R6711	$	0
R6712	$	0
R6713	$	0
R6714	$	0
R6715	0	$
R6716	0	$
R6717	$	0
R6718	$	0
R7004	1M[22]	$[22]
R7007	100K[18]	$[18]
R7025	$[36]	0[36]

GS300 series: GS300
GS300EG/E/EP/EB/GC/SG/EE/GN/P/PC/GD/GT
GS280EG/EF/E/EP/EB GS308GK
GS500 series: GS500EG/E/EP/EB/GC/SG/EE/GN/PP/GD/GT
GS508GK

NV-GS300/GS308/GS280 Series
Front
Schematic Diagram
3/4

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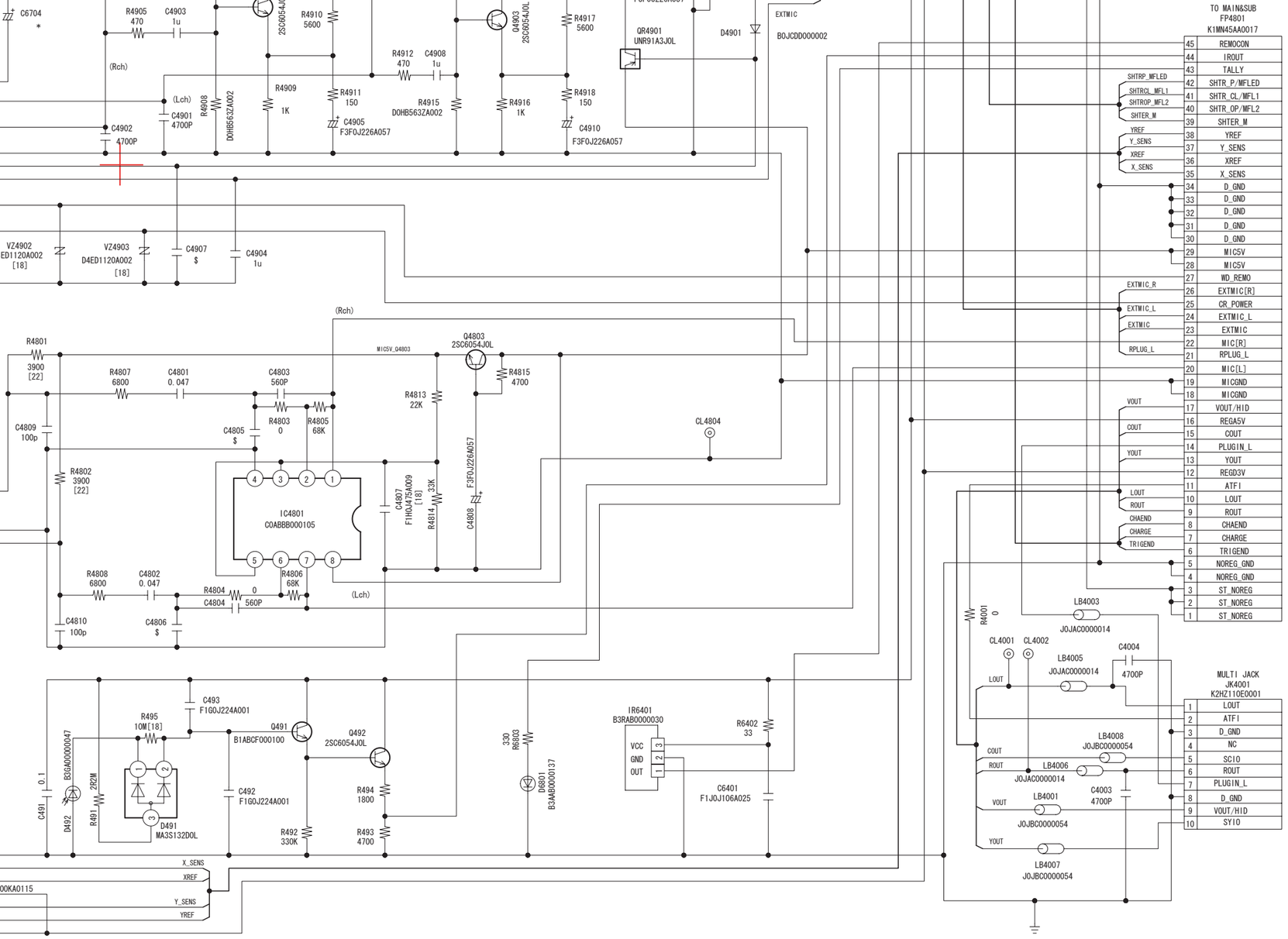

NV-GS300/GS308/GS280 Series
Front
Schematic Diagram
4/4

11 12 13 14 15 16 17 18 19 20 21

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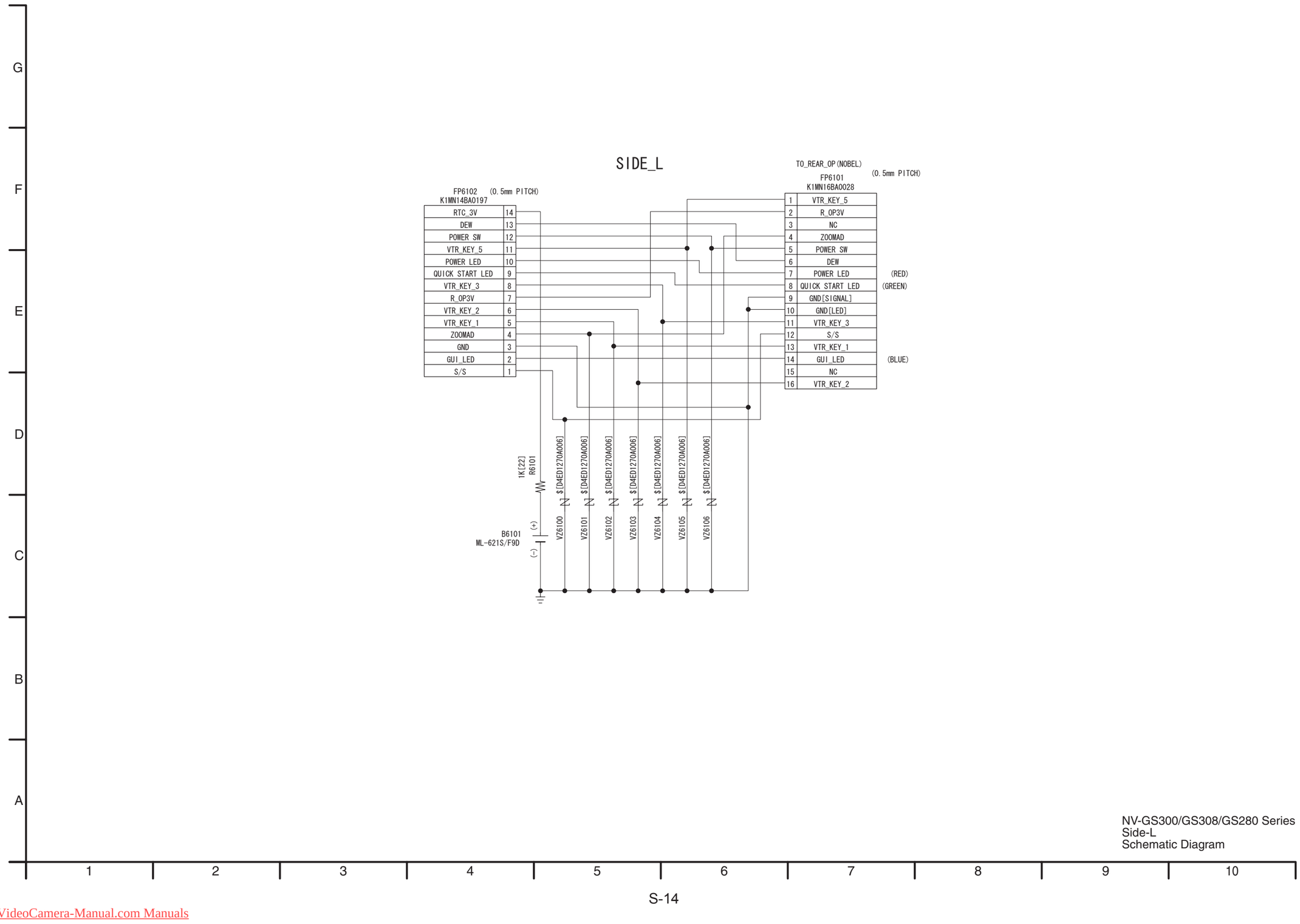
S4.8. Side-L Schematic Diagram



NV-GS300/GS308/GS280 Series
Side-L
Schematic Diagram

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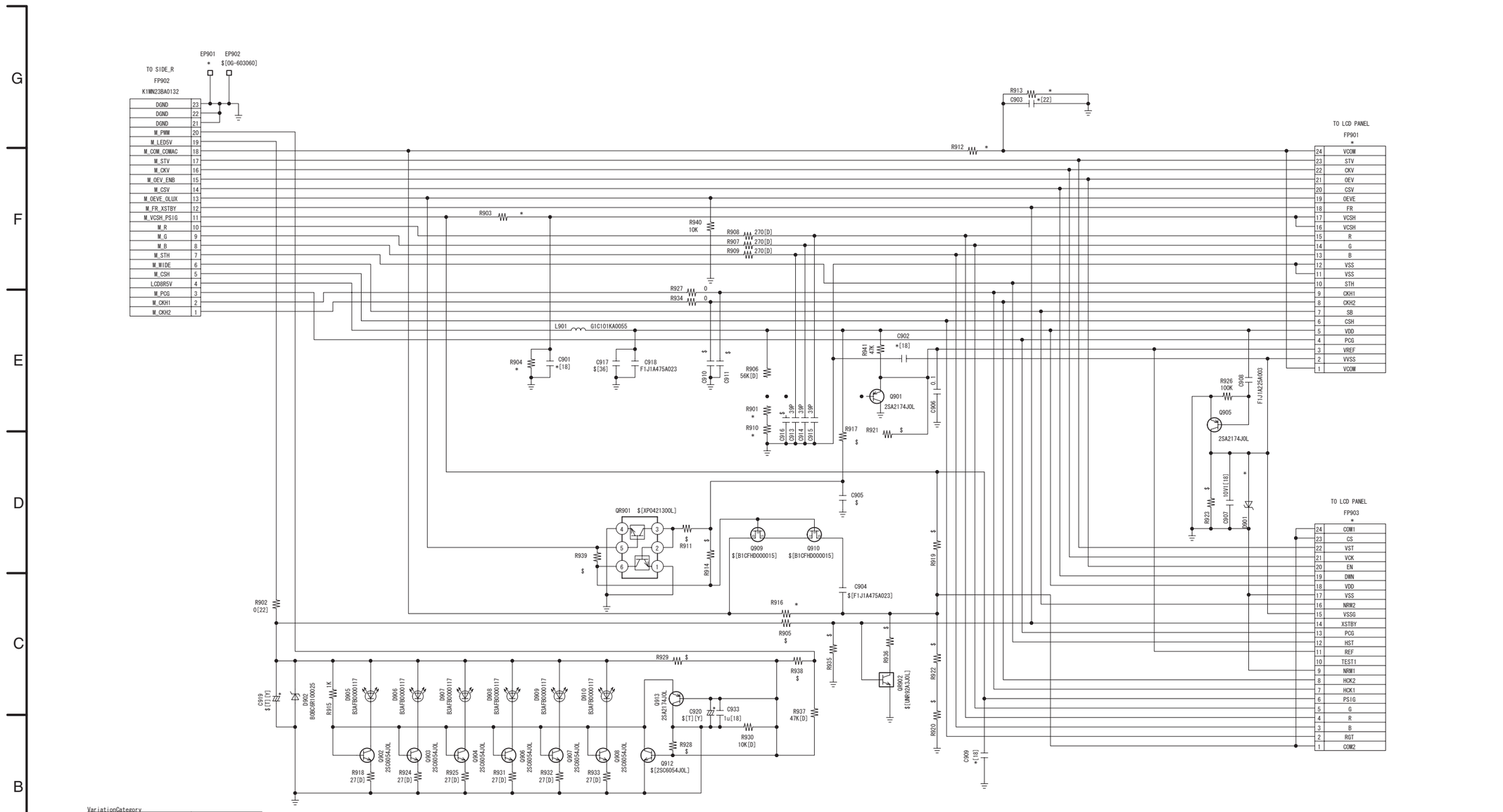
S4.9. Monitor Schematic Diagram



VariationCategory

	GS300	GS500
C901	10V1[18]	$[18]
C902	10V1[18]	$[18]
C903	10V4R7[22]	$[22]
C909	$[18]	10V1[18]
D901	$[MAZ80560ML]	MAZ80560ML
EP901	VMC1897	$[VMC1897]
FP901	K1MN24BA0055	$[K1MN24BA0055]
FP903	$[K1MN24BA0055]	K1MN24BA0055
R901	1200[D]	0
R903	1800[D]	$
R904	15K[D]	$
R910	8200[D]	5600[D]
R912	1K[D]	$
R913	4700[D]	$
R916	$	0

GS300 series: GS300
GS300EG/E/EP/EB/GC/SG/EE/GN/P/PC/GD/GT
GS280EG/EF/E/EP/EB GS308GK
GS500 series: GS500EG/E/EP/EB/GC/SG/EE/GN/PP/GD/GT
GS508GK

NV-GS300/GS308/GS280 Series
Monitor
Schematic Diagram

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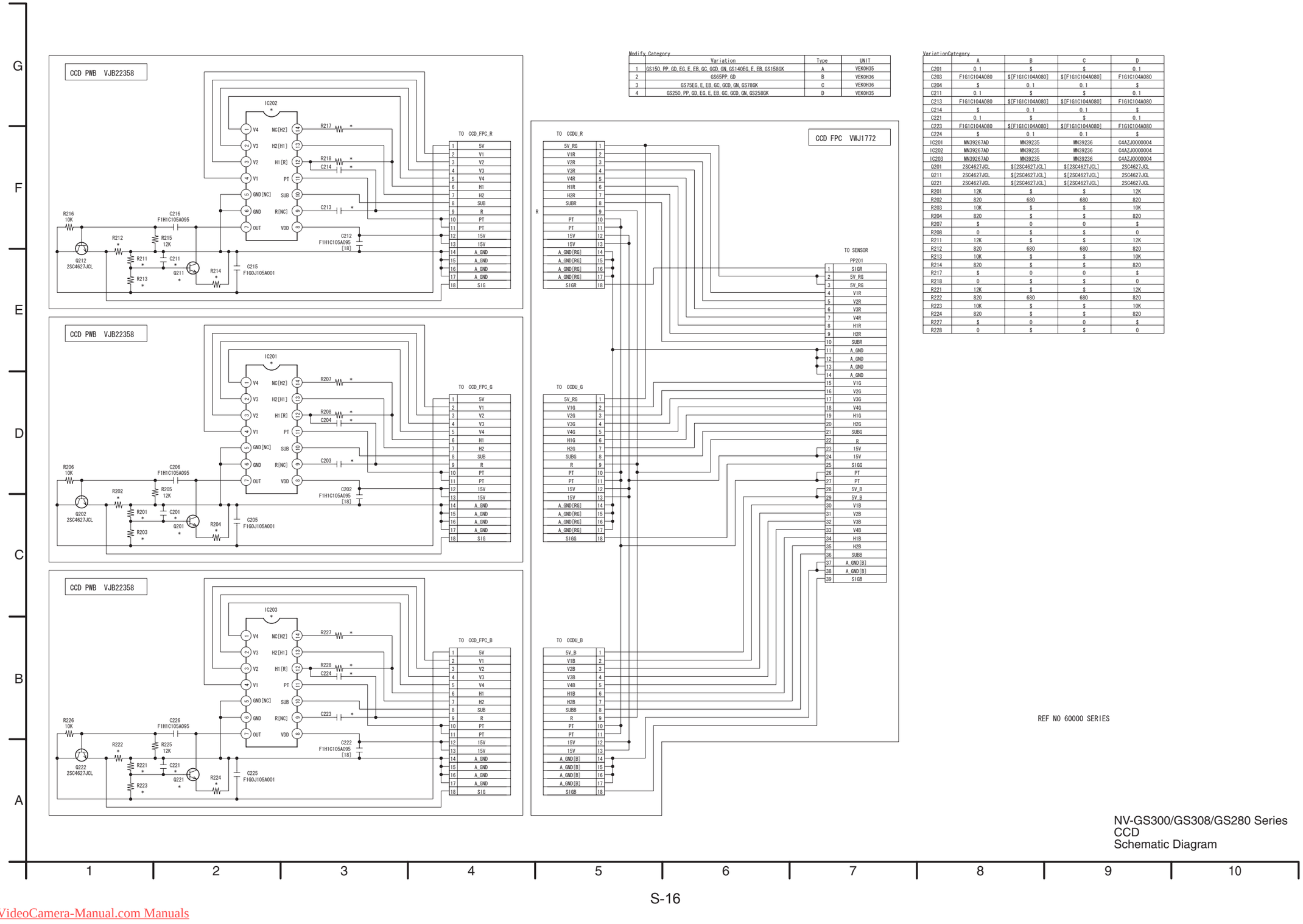
S4.10. CCD Schematic Diagram



Modify Category

	Variation	Type	UNIT
1	GS150, PP, GD, EG, E, EB, GC, GCD, GN, GS140EG, E, EB, GS158GK	A	VEK0H35
2	GS65PP, GD	B	VEK0H36
3	GS75EG, E, EB, GC, GCD, GN, GS78GK	C	VEK0H36
4	GS250, PP, GD, EG, E, EB, GC, GCD, GN, GS258GK	D	VEK0H35

VariationCategory

	A	B	C	D
C201	0.1	$	$	0.1
C203	F1G1C104A080	$[F1G1C104A080]	$[F1G1C104A080]	F1G1C104A080
C204	$	0.1	0.1	$
C211	0.1	$	$	0.1
C213	F1G1C104A080	$[F1G1C104A080]	$[F1G1C104A080]	F1G1C104A080
C214	$	0.1	0.1	$
C221	0.1	$	$	0.1
C223	F1G1C104A080	$[F1G1C104A080]	$[F1G1C104A080]	F1G1C104A080
C224	$	0.1	0.1	$
IC201	MN39267AD	MN39235	MN39236	C4AZJ0000004
IC202	MN39267AD	MN39235	MN39236	C4AZJ0000004
IC203	MN39267AD	MN39235	MN39236	C4AZJ0000004
Q201	2SC4627JCL	$[2SC4627JCL]	$[2SC4627JCL]	2SC4627JCL
Q211	2SC4627JCL	$[2SC4627JCL]	$[2SC4627JCL]	2SC4627JCL
Q221	2SC4627JCL	$[2SC4627JCL]	$[2SC4627JCL]	2SC4627JCL
R201	12K	$	$	12K
R202	820	680	680	820
R203	10K	$	$	10K
R204	820	$	$	820
R207	$	0	0	$
R208	0	$	$	0
R211	12K	$	$	12K
R212	820	680	680	820
R213	10K	$	$	10K
R214	820	$	$	820
R217	$	0	0	$
R218	0	$	$	0
R221	12K	$	$	12K
R222	820	680	680	820
R223	10K	$	$	10K
R224	820	$	$	820
R227	$	0	0	$
R228	0	$	$	0

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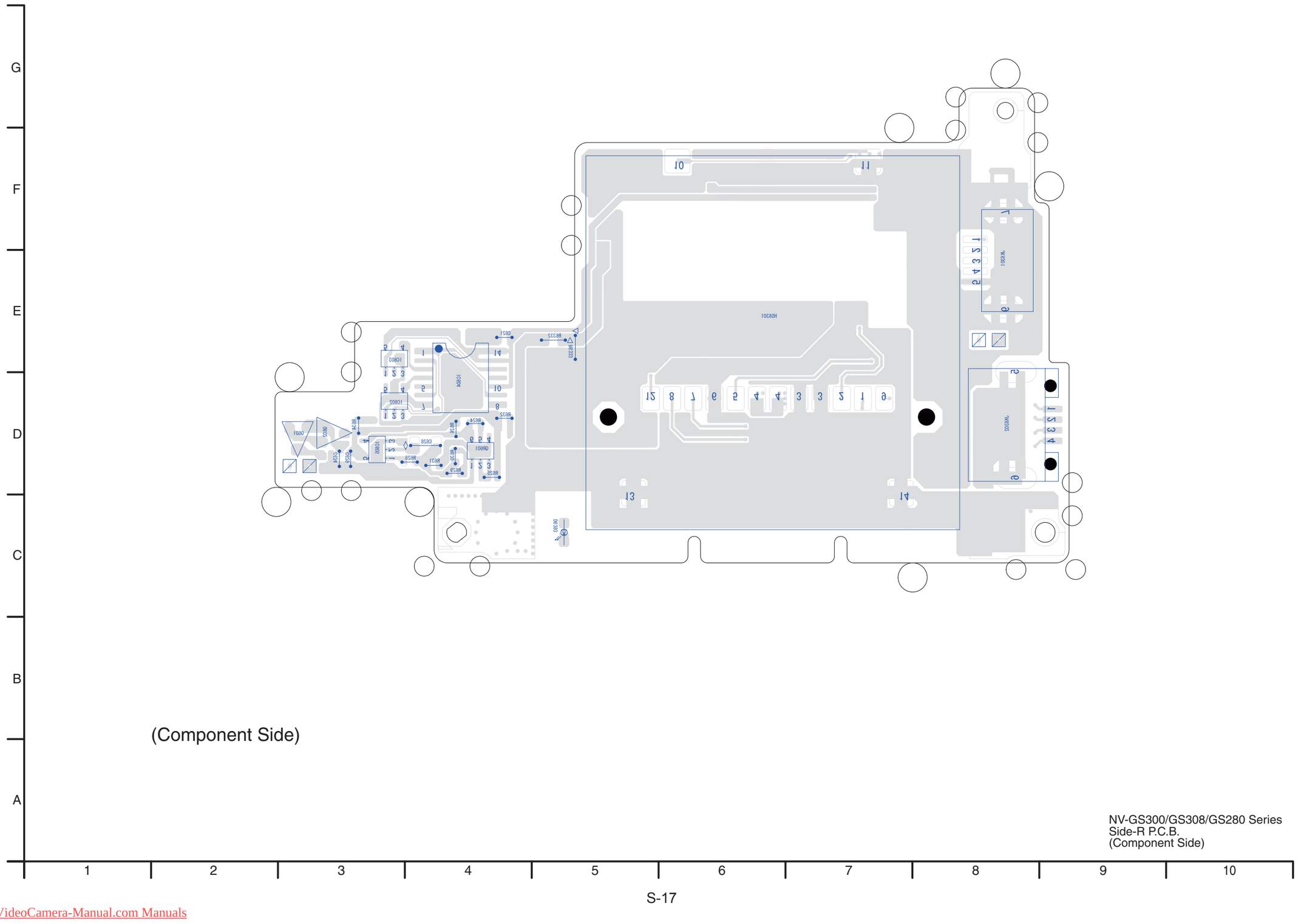
S5. Print Circuit Board

S5.1. Side-R P.C.B.

S5.1.1. Side-R P.C.B. (Component Side)



NV-GS300/GS308/GS280 Series
Side-R P.C.B.
(Component Side)

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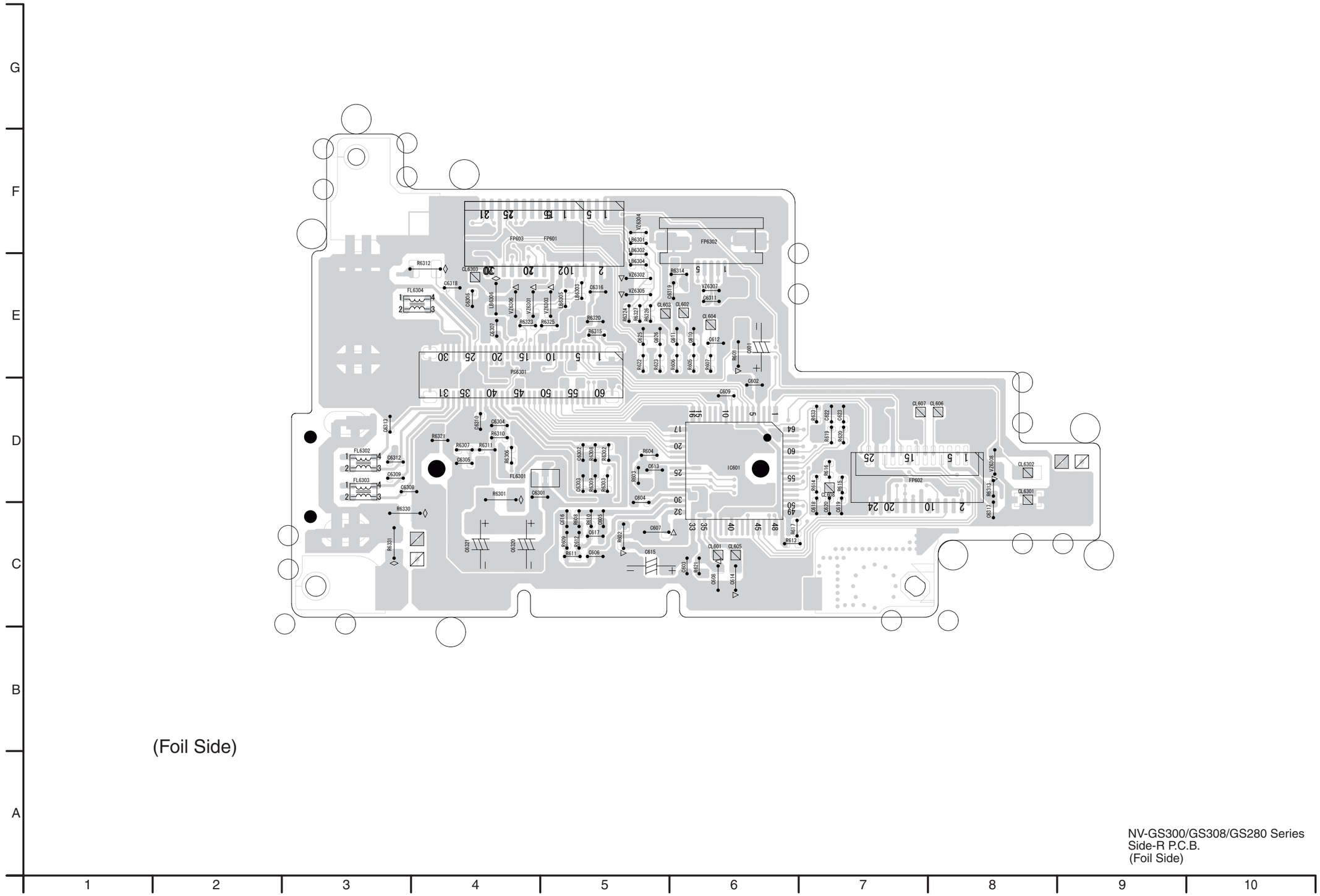
S5.1.2. Side-R P.C.B. (Foil Side)



(Foil Side)

NV-GS300/GS308/GS280 Series
Side-R P.C.B.
(Foil Side)

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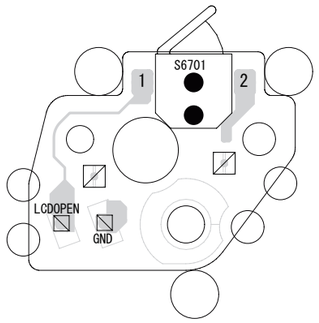
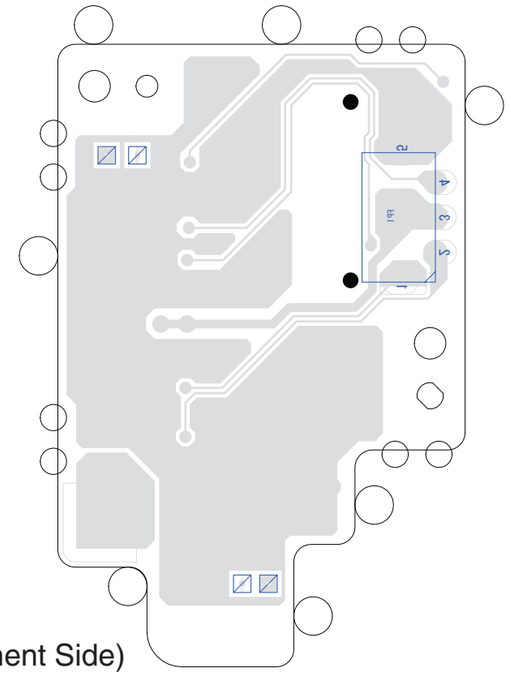
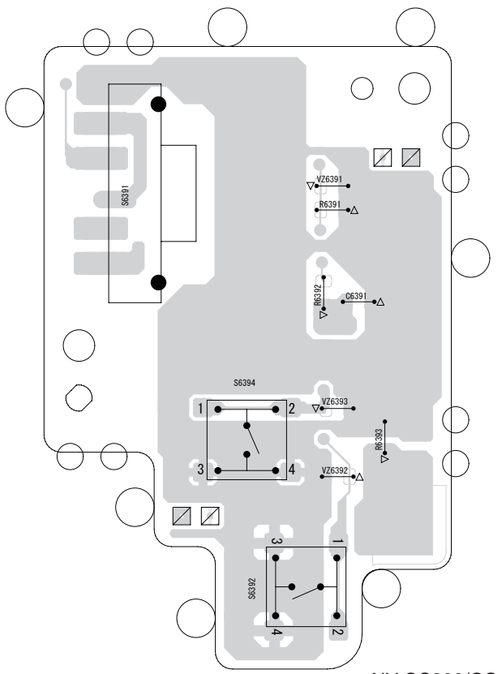
S5.2. LCD Det P.C.B. / S5.3. Operation (R) P.C.B. / S5.4. EVF P.C.B.



NV-GS300/GS308/GS280 Series
LCD Det P.C.B.

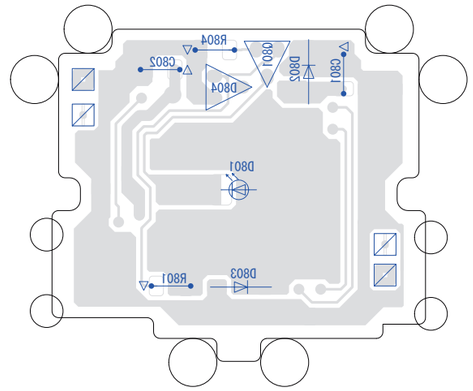


(Component Side)

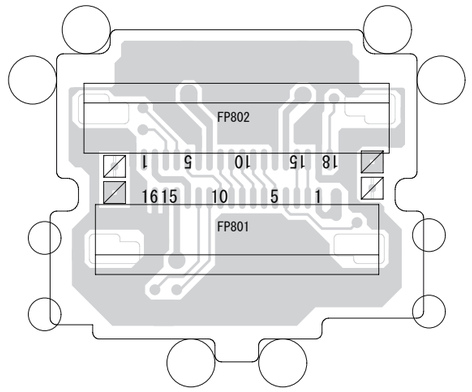


(Foil Side)

NV-GS300/GS308/GS280 Series
Operation (R) P.C.B.



(Component Side)



(Foil Side)

NV-GS300/GS308/GS280 Series
EVF P.C.B.

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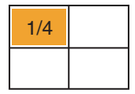
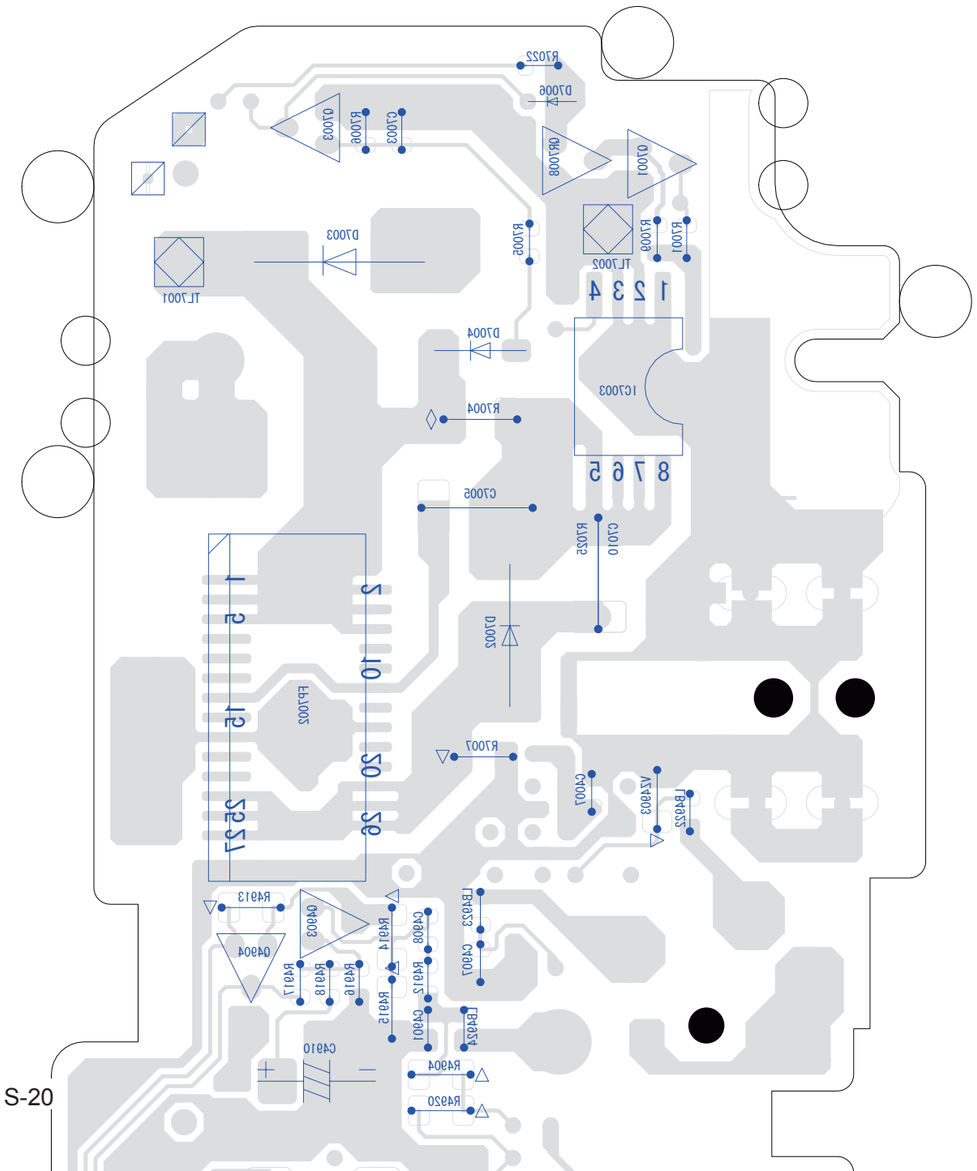
S5.5. Front P.C.B.



NV-GS300/GS308/GS280 Series
Front P.C.B.
(Component Side)



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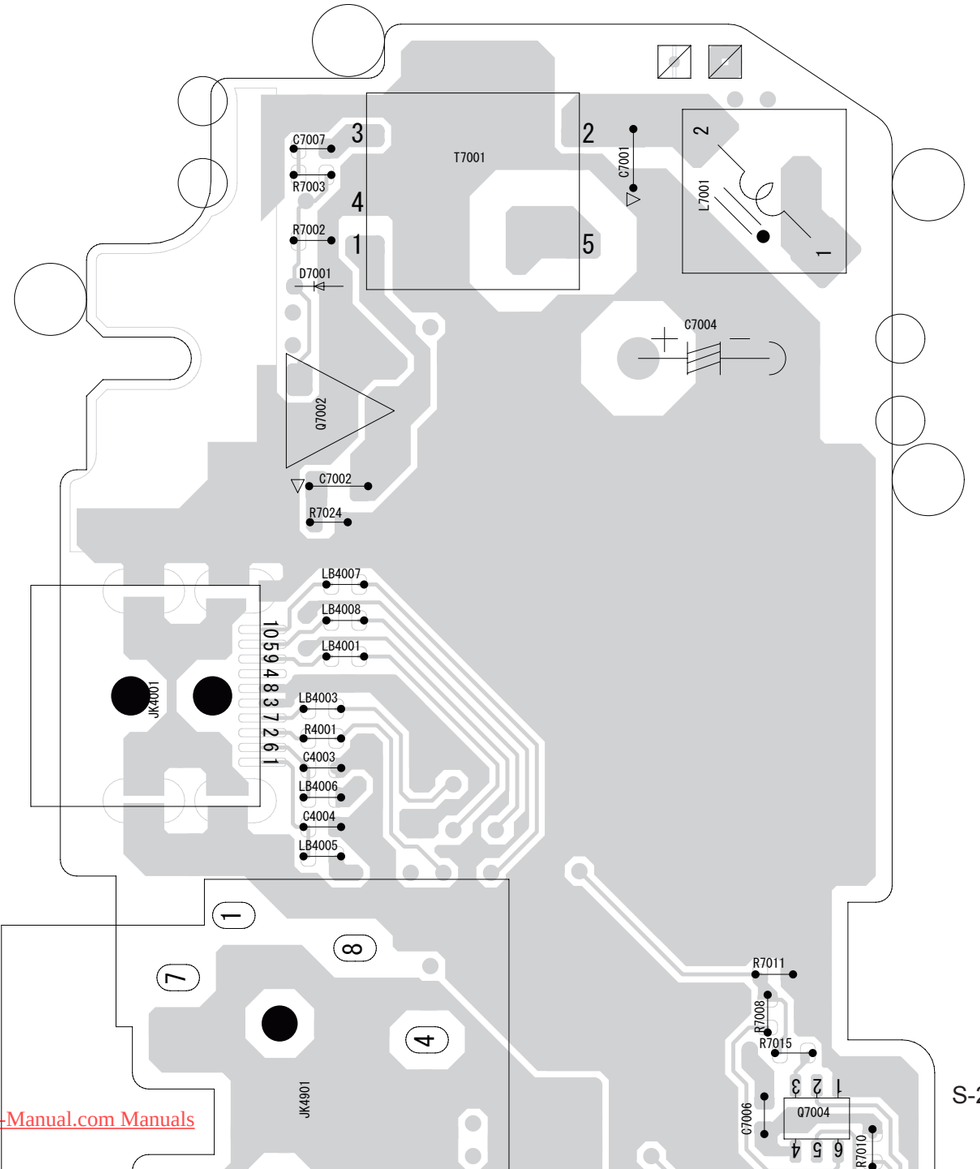

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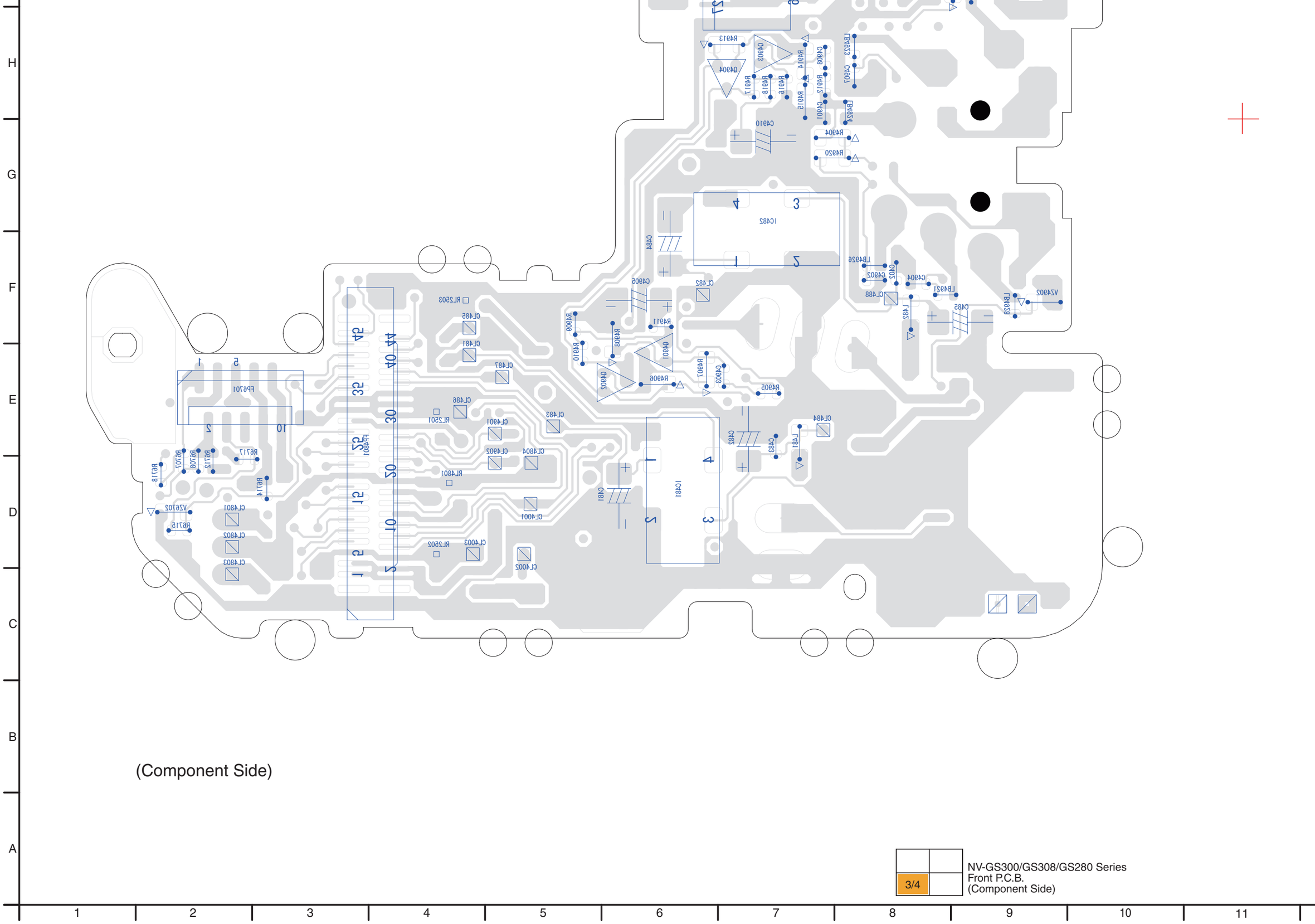

(Component Side)

NV-GS300/GS308/GS280 Series
Front P.C.B.
(Component Side)

3/4

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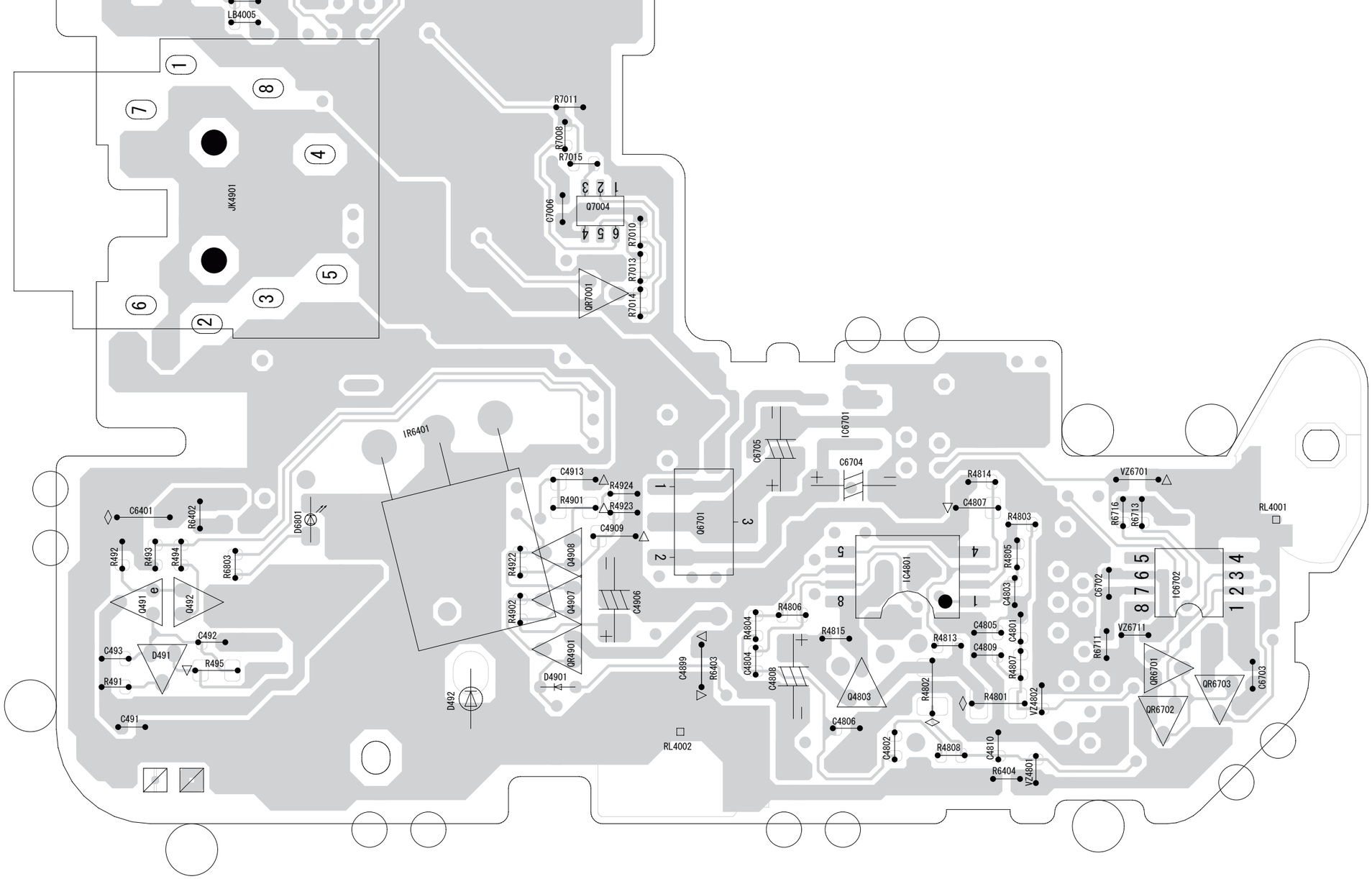

(Foil Side)

NV-GS300/GS308/GS280 Series
Front P.C.B.
(Foil Side)

4/4

11 12 13 14 15 16 17 18 19 20 21

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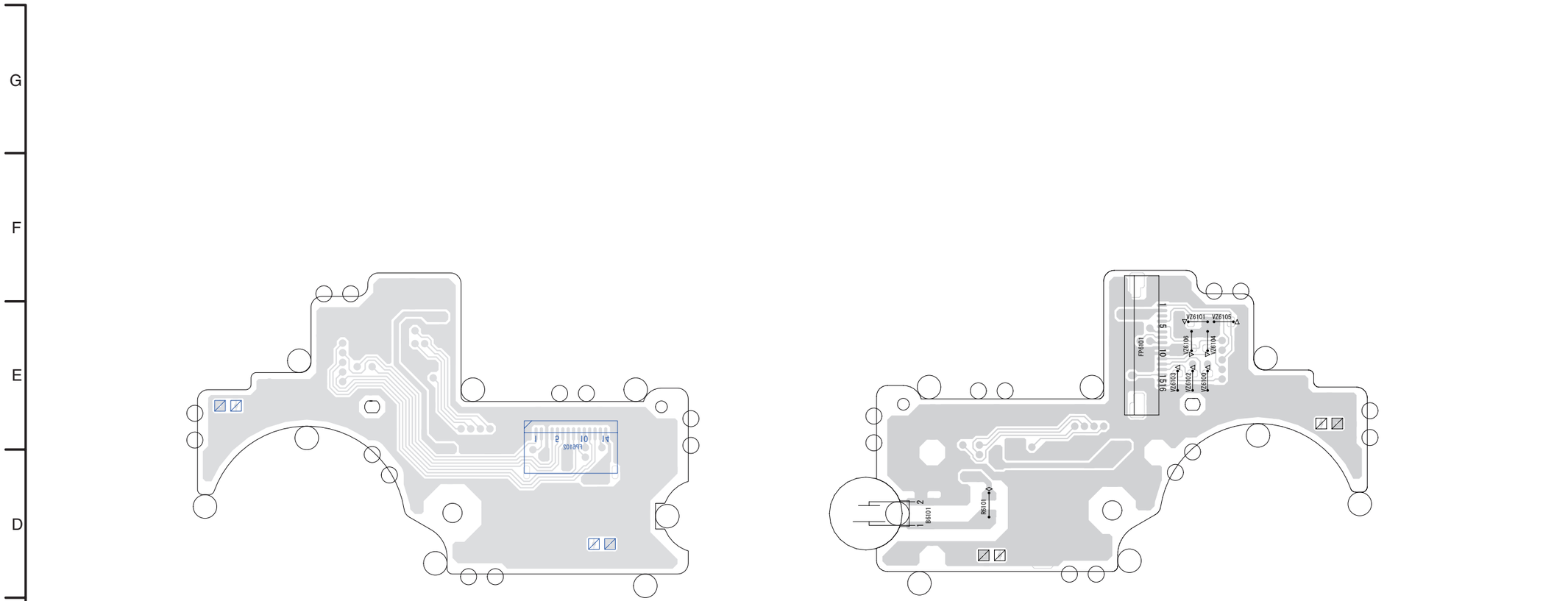
S5.6. Side-L P.C.B.



NV-GS300/GS308/GS280 Series
Side-L P.C.B.

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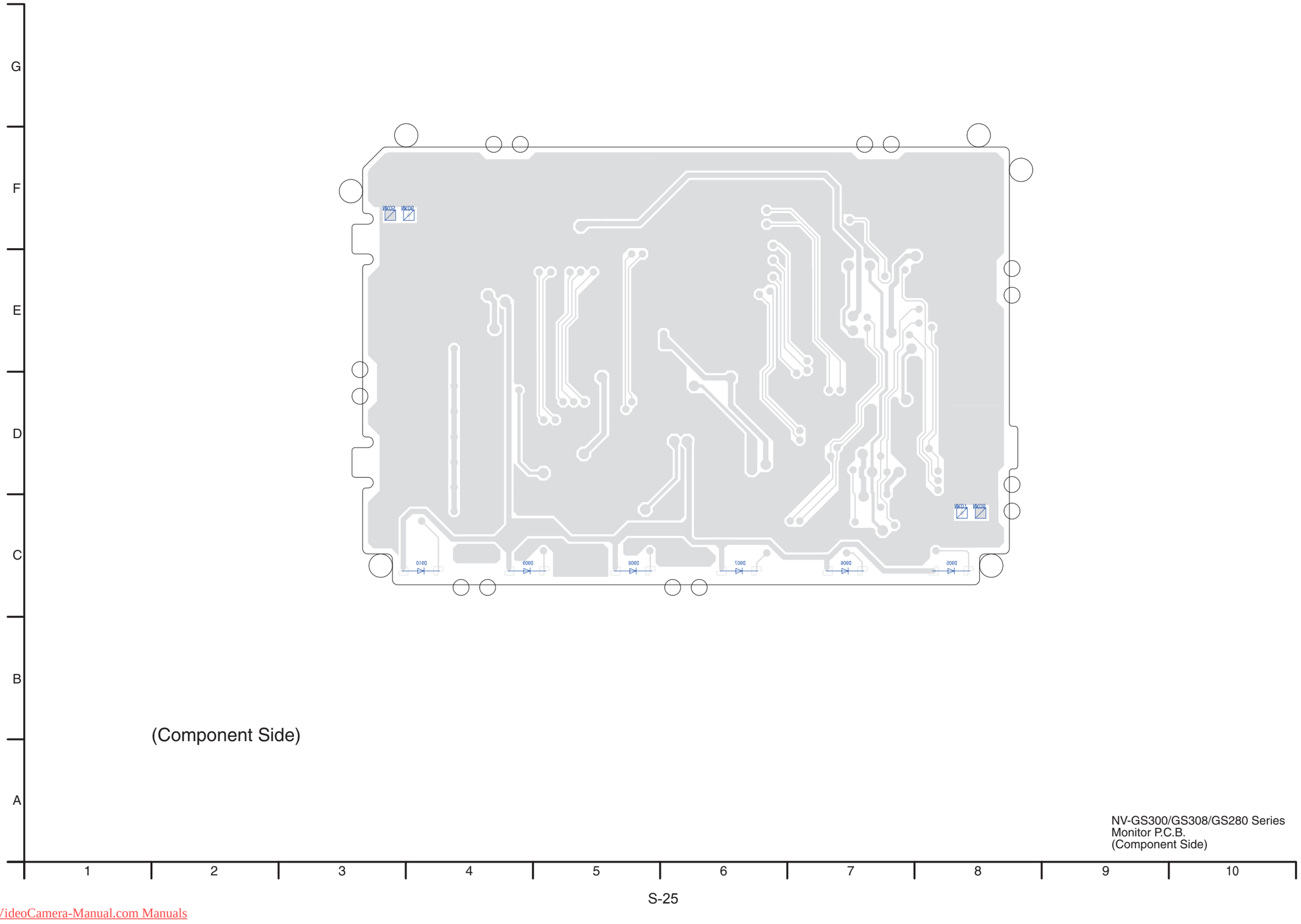
S5.7. Monitor P.C.B.

S5.7.1. Monitor P.C.B. (Component Side)



NV-GS300/GS308/GS280 Series
Monitor P.C.B.
(Component Side)

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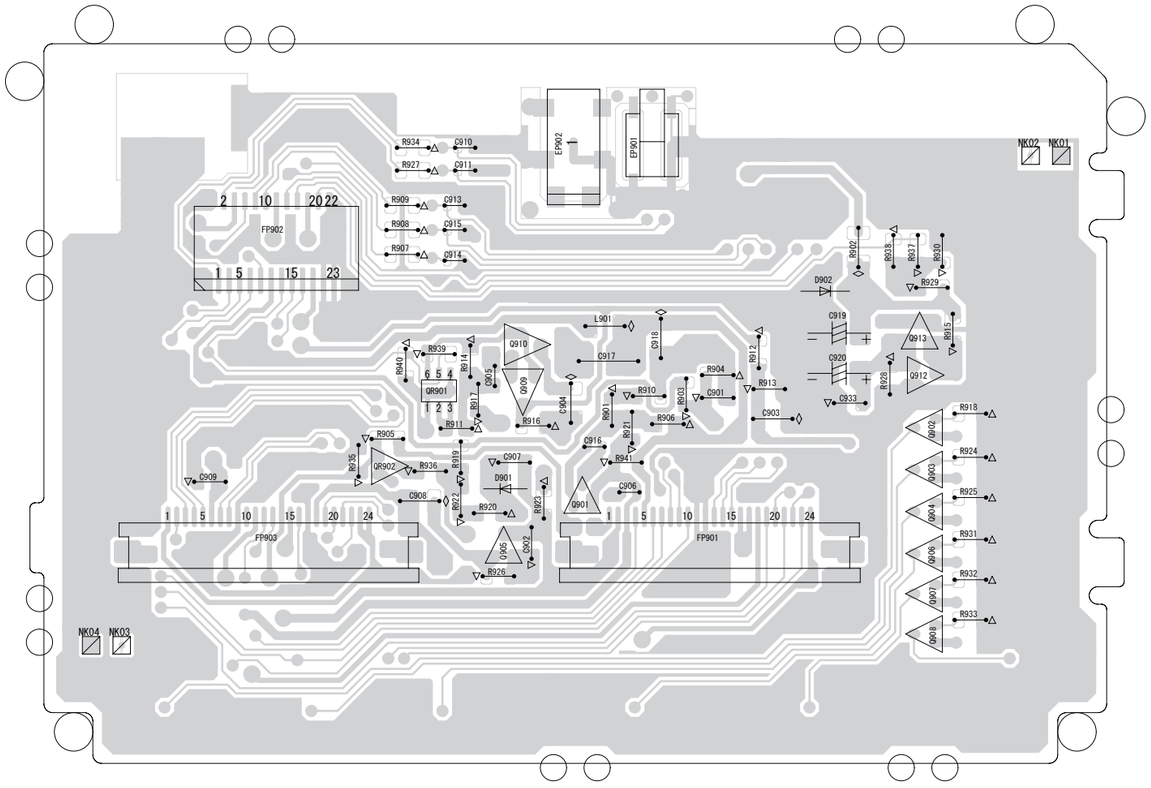
S5.7.2. Monitor P.C.B. (Foil Side)



(Foil Side)

NV-GS300/GS308/GS280 Series
Monitor P.C.B.
(Foil Side)

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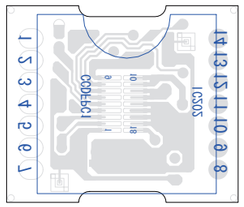
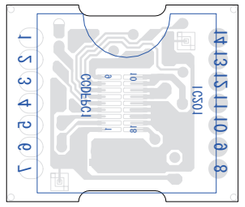
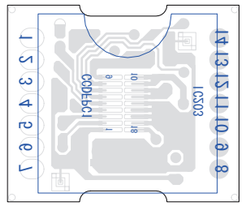
S5.8. CCD Card P.C.B. (R) / S5.9. CCD P.C.B. Card (G) / S5.10. CCD Card P.C.B. (B)



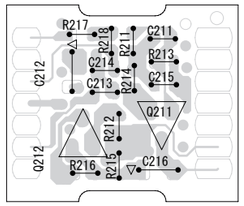
(Component Side)



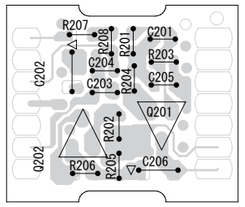
(Component Side)



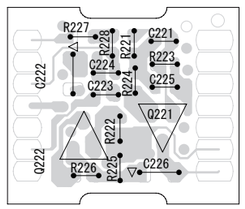
(Component Side)



(Foil Side)



(Foil Side)



(Foil Side)

NV-GS300/GS308/GS280 Series
CCD Card P.C.B. (R)

NV-GS300/GS308/GS280 Series
CCD Card P.C.B. (G)

NV-GS300/GS308/GS280 Series
CCD Card P.C.B. (B)

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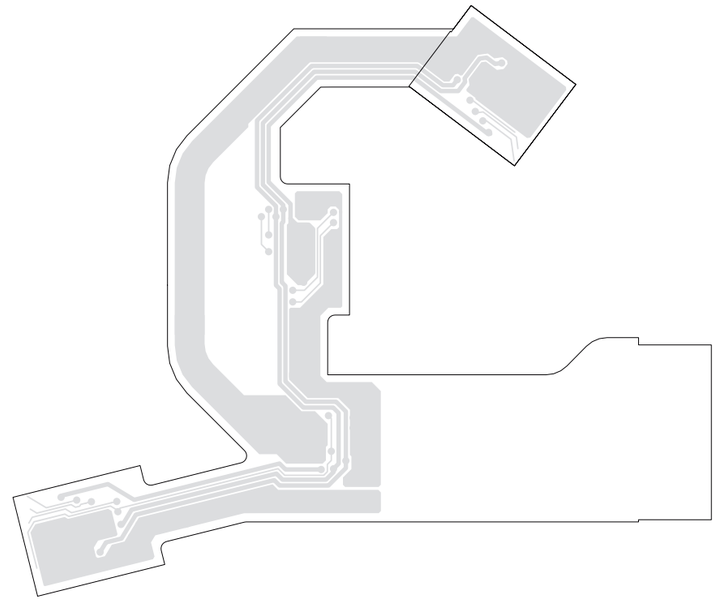
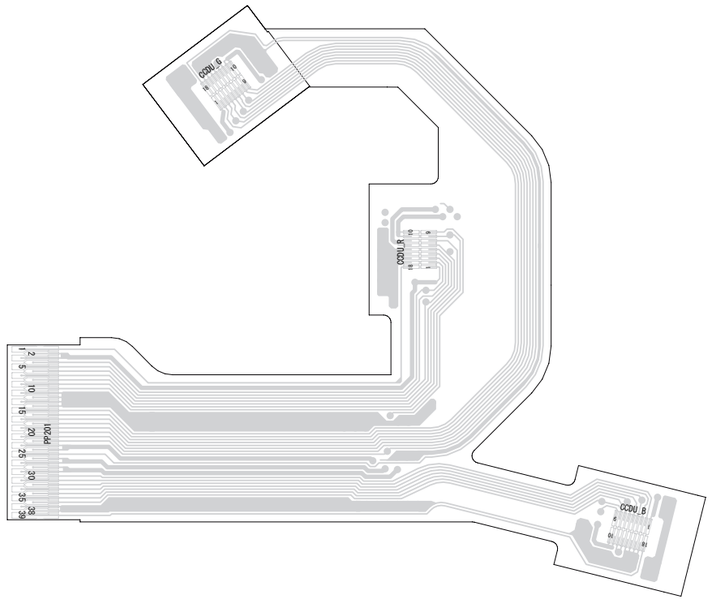
S5.11. CCD Flex



(Component Side)



(Foil Side)

NV-GS300/GS308/GS280 Series
CCD Flex

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S6. Replacement Parts List

Note: 1.* Be sure to make your orders of replacement parts according to this list.

2. IMPORTANT SAFETY NOTICE
   Components identified with the mark ⚠ have the special characteristics for safety.
   When replacing any of these components, use only the same type.

3. Unless otherwise specified,
   All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P=uuF.

4. The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

E.S.D. standards for Electrostatically Sensitive Devices, refer to "PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section.

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
##	03	VEP001L1A (SIDE-R P.C.B.)		(RTL)
C601	F3F0G4760003	E.CAPACITOR CH 4V 47U	1	
C603	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C604	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C605	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C606	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C607	F1H0J2250003	C.CAPACITOR CH 6.3V 2.2U	1	
C608	F1H0J2250003	C.CAPACITOR CH 6.3V 2.2U	1	
C609	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C613	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C614	F1H0J2250003	C.CAPACITOR CH 6.3V 2.2U	1	
C616	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C6301	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C6302	ECJ0EC1H820J	C.CAPACITOR CH 50V 82P	1	
C6303	ECJ0EC1H820J	C.CAPACITOR CH 50V 82P	1	
C6304	ECJ0EC1H820J	C.CAPACITOR CH 50V 82P	1	
C6305	ECJ0EC1H820J	C.CAPACITOR CH 50V 82P	1	
C6306	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C6307	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C6310	ECJ0EC1H050C	C.CAPACITOR CH 50V 5P	1	
C6311	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C6318	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C6320	F3G0J1070004	E.CAPACITOR CH 6.3V 100U	1	
C6321	F3G0J1070004	E.CAPACITOR CH 6.3V 100U	1	
D6393	B3AAB0000137	DIODE	1	
FL6301	F1H0J1050022	C.CAPACITOR CH 6.3V 1U	1	
FL6302	J0MAB0000212	FILTER	1	
FL6303	J0MAB0000212	FILTER	1	
FL6304	J0MAB0000212	FILTER	1	
FP602	K1MN25BA0199	CONNECTOR 25P	1	
FP603	K1MN21BA0132	CONNECTOR 21P	1	
FP6302	K1MN05BA0055	CONNECTOR 5P	1	
HS6301	K1NA09E00038	CONNECTOR 9P	1	
IC601	C1AB00002388	IC	1	
JK6301	K2HZ105D0001	JACK	1	
JK6302	K1FA104A0017	JACK	1	
PS6301	K1KB60BA0065	CONNECTOR 60P	1	
R601	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
R602	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
R603	ERJ2RHD511	M.RESISTOR CH 1/16W 510	1	
R604	ERJ2RHD102	M.RESISTOR CH 1/16W 1K	1	
R605	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R606	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R607	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R608	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
R609	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
R614	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R615	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R616	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R617	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R619	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R620	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R621	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R622	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R623	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R629	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R633	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6301	ERJ6GEYJR47	M.RESISTOR CH 1/10W 0.47	1	
R6302	ERJ2GEJ150	M.RESISTOR CH 1/16W 15	1	
R6303	ERJ2GEJ150	M.RESISTOR CH 1/16W 15	1	
R6306	ERJ2GEJ150	M.RESISTOR CH 1/16W 15	1	
R6307	ERJ2GEJ150	M.RESISTOR CH 1/16W 15	1	
R6308	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R6309	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R6310	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6311	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R6312	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	1	
R6313	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6314	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6315	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6320	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6321	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6323	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6324	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6325	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6330	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	1	D0GBR00JA017
R6331	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	1	D0GBR00JA017
R6333	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
R6334	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
R6335	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
R6336	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
R6337	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
VZ6308	D4ED1120A002	SURGE ABSORBER	1	
##	04	VEP001L2A (LCD DET P.C.B)		(RTL)
S6701	K0L1AA000011	SWITCH	1	
##	05	VEP001L5A (OPERATION (R) P.C.B.)		(RTL)
R6391	D0GB473JA057	M.RESISTOR CH 1/10W 47K	1	
R6392	D0GB473JA057	M.RESISTOR CH 1/10W 47K	1	
S6391	VSS0533	SWITCH	1	K0D112A00116
S6392	K0H1BA000436	SWITCH	1	
S6394	K0H1BA000436	SWITCH	1	
VZ6391	D4ED1270A006	SURGE ABSORBER	1	
VZ6392	D4ED1270A006	SURGE ABSORBER	1	
VZ6393	D4ED1270A006	SURGE ABSORBER	1	
##	06	VEP29169A (EVF P.C.B.)		(RTL)
C801	ECJ1VB0J474K	C.CAPACITOR CH 6.3V 0.47U	1	
C802	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
D801	B3AFB0000129	DIODE	1	
D802	MA8047M	DIODE	1	MAZ80470M
D803	B0BC6R100025	DIODE	1	
D804	MA3S13300L	DIODE	1	
FP801	K1MN16BA0027	CONNECTOR 16P	1	
FP802	K1MN18BA0027	CONNECTOR 18P	1	
Q801	2SC6054J0L	TRANSISTOR	1	
R801	ERJ3GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R804	ERJ3RED680	M.RESISTOR CH 1/16W 68	1	ERJ3RED680V
##	07	VEP04899A (FRONT P.C.B.)		(RTL)
C481	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C482	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C484	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C485	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C491	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C492	F1G0J224A004	C.CAPACITOR CH 6.3V 0.22U	1	
C493	F1G0J224A004	C.CAPACITOR CH 6.3V 0.22U	1	
C4003	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4004	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4007	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4801	ECJ0EB1A473K	C.CAPACITOR CH 10V 0.047U	1	
C4802	ECJ0EB1A473K	C.CAPACITOR CH 10V 0.047U	1	
C4803	ECJ0EB1E561K	C.CAPACITOR CH 25V 560P	1	
C4804	ECJ0EB1E561K	C.CAPACITOR CH 25V 560P	1	
C4807	F1H0J475A009	C.CAPACITOR CH 6.3V 4.7U	1	
C4808	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C4809	ECJ0EC1H101J	C.CAPACITOR CH 50V 100P	1	
C4810	ECJ0EC1H101J	C.CAPACITOR CH 50V 100P	1	
C4899	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
C4901	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4902	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C4903	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C4904	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C4905	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C4906	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C4908	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C4909	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
C4910	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C4913	F1H0J475A009	C.CAPACITOR CH 6.3V 4.7U	1	
C6401	F1J0J106A025	C.CAPACITOR CH 6.3V 10U	1	
C6702	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C6703	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C6704	F3F0J106A057	E.CAPACITOR CH 6.3V 10U	1	
C6705	F3F0J226A057	E.CAPACITOR CH 6.3V 22U	1	
C7001	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
C7002	ECJ1XB1H471K	C.CAPACITOR CH 50V 470P	1	
C7003	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C7004	F2AZZ6500004	CAPACITOR	1	
C7005	F1K2E4730002	C.CAPACITOR 250V 0.047U	1	
C7006	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C7007	ECJ0EB1E472K	C.CAPACITOR CH 25V 4700P	1	
C7010	F1K2E223A004	C.CAPACITOR 250V 0.022U	1	
D491	MA3S132D0L	DIODE	1	
D492	B3GA00000047	DIODE	1	
D4901	B0JCDD000002	DIODE	1	
D6801	B3AAB0000137	DIODE	1	
D7001	MA2S11100L	DIODE	1	
D7002	B0ECKP000024	DIODE	1	
D7003	B0ECKT000002	DIODE	1	
D7004	B0BC30000001	DIODE	1	
D7006	B0JCDD000002	DIODE	1	
FP4801	K1MN45A00002	CONNECTOR 45P	1	
FP6701	K1MN10A00074	CONNECTOR 10P	1	
FP7002	K1MN27B00036	CONNECTOR 27P	1	
IC481	L2ES00000015	IC	1	
IC482	L2ES00000014	IC	1	
IC4801	NJM2115V	IC	1	C0ABBB000104
IC6701	C0DBZGZ00046	IC	1	
IC6702	C0GBF0000024	IC	1	
IC7003	B1JBLP000011	IC	1	
IR6401	B3RAB0000030	IR RECEIVER	1	
JK4001	K2HZ110E0002	JACK	1	
JK4901	K2HC107B0003	JACK	1	
L481	G1C100MA0211	COIL 10UH	1	
L482	G1C100MA0211	COIL 10UH	1	
L7001	G1C560MA0024	CHIP INDUCTOR 56UH	1	
LB4001	J0JBC0000054	FILTER	1	J0JBC0000059
LB4003	J0JAC0000014	FILTER	1	J0JAC0000016
LB4005	J0JAC0000014	FILTER	1	J0JAC0000016
LB4006	J0JAC0000014	FILTER	1	J0JAC0000016
LB4007	J0JBC0000054	FILTER	1	J0JBC0000059
LB4008	J0JBC0000054	FILTER	1	J0JBC0000059
LB4921	J0JBC0000107	FILTER	1	
LB4922	J0JBC0000107	FILTER	1	
LB4923	J0JBC0000107	FILTER	1	
LB4924	J0JBC0000107	FILTER	1	
LB4926	J0JBC0000107	FILTER	1	
LB4928	J0JBC0000107	FILTER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q491	B1ABCF000100	TRANSISTOR	1	
Q492	2SC6054J0L	TRANSISTOR	1	
Q4803	2SC6054J0L	TRANSISTOR	1	
Q4901	2SC6054J0L	TRANSISTOR	1	
Q4902	2SA2174J0L	TRANSISTOR	1	
Q4903	2SC6054J0L	TRANSISTOR	1	
Q4904	2SA2174J0L	TRANSISTOR	1	
Q4907	2SC6054J0L	TRANSISTOR	1	
Q4908	2SC6054J0L	TRANSISTOR	1	
Q6701	B1BDBC000005	TRANSISTOR	1	
Q7001	2SC6054J0L	TRANSISTOR	1	
Q7002	B1ABPF000009	TRANSISTOR	1	
Q7003	2SC6054J0L	TRANSISTOR	1	
Q7004	XP0460100L	TRANSISTOR	1	
QR4901	UNR91A3J0L	TRANSISTOR	1	
QR6701	UNR92A3J0L	TRANSISTOR	1	
QR6702	UNR92A3J0L	TRANSISTOR	1	
QR6703	UNR91A5J0L	TRANSISTOR	1	
QR7001	UNR92A4J0L	TRANSISTOR	1	
QR7008	UNR92A4J0L	TRANSISTOR	1	
R491	ERJ2GEJ225	M.RESISTOR CH 1/16W 2.2M	1	ERJ2RMJ225X
R492	ERJ2GEJ334	M.RESISTOR CH 1/16W 330K	1	
R493	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1	
R494	ERJ2GEJ182	M.RESISTOR CH 1/16W 1.8K	1	
R495	ERJ3GEYJ106	M.RESISTOR CH 1/10W 10M	1	
R4001	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R4801	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4802	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4803	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R4804	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R4805	ERJ2GEJ683	M.RESISTOR CH 1/16W 68K	1	
R4806	ERJ2GEJ683	M.RESISTOR CH 1/16W 68K	1	
R4807	ERJ2RHD682X	M.RESISTOR CH 1/16W 6.8K	1	
R4808	ERJ2RHD682X	M.RESISTOR CH 1/16W 6.8K	1	
R4813	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
R4814	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R4815	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4901	ERJ3RBD331	M.RESISTOR CH 1/16W 330	1	
R4902	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4904	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R4905	ERJ2GEJ471	M.RESISTOR CH 1/16W 470	1	
R4906	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R4907	VRE0071E154	M.RESISTOR 150K	1	D0HB154ZA004
R4908	ERJ3RBD563	M.RESISTOR CH 1/16W 56K	1	ERJ3RBD563V
R4909	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	ERJ2RMJ102X
R4910	ERJ2GEJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4911	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R4912	ERJ2GEJ471	M.RESISTOR CH 1/16W 470	1	
R4913	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R4914	VRE0071E154	M.RESISTOR 150K	1	D0HB154ZA004
R4915	ERJ3RBD563	M.RESISTOR CH 1/16W 56K	1	ERJ3RBD563V
R4916	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	ERJ2RMJ102X
R4917	ERJ2GEJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4918	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R4920	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R4922	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
R4923	ERJ2GEJ683	M.RESISTOR CH 1/16W 68K	1	
R4924	ERJ2GEJ473Y	M.RESISTOR CH 1/16W 47K	1	
R6402	ERJ2RKD330	M.RESISTOR CH 1/16W 33	1	
R6707	ERJ2GEJ181	M.RESISTOR CH 1/16W 180	1	
R6708	ERJ2GEJ181	M.RESISTOR CH 1/16W 180	1	
R6715	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6716	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R6803	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	1	
R7001	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R7002	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R7003	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R7004	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R7005	ERJ2GEJ334	M.RESISTOR CH 1/16W 330K	1	
R7006	ERJ2GEJ564	M.RESISTOR CH 1/16W 560K	1	
R7007	ERJ3GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7008	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R7009	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R7010	ERJ2GEJ222	M.RESISTOR CH 1/16W 2.2K	1	
R7011	ERJ2GEJ104	M.RESISTOR CH 1/16W 100K	1	
R7013	ERJ2GEJ822	M.RESISTOR CH 1/16W 8.2K	1	
R7014	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
R7015	ERJ2GEJ560	M.RESISTOR CH 1/16W 56	1	
R7022	ERJ2GEJ102X	M.RESISTOR CH 1/16W 1K	1	ERJ2RMJ102X
R7024	ERJ2GEJ510	M.RESISTOR CH 1/16W 51	1	
T7001	G5D1A0000040	TRANSFORMER	1	
VZ4801	D4ED1270A003	SURGE ABSORBER	1	
VZ4802	D4ED1270A003	SURGE ABSORBER	1	
VZ4902	D4ED1120A002	SURGE ABSORBER	1	
VZ4903	D4ED1120A002	SURGE ABSORBER	1	
##	08	VEP001L3A (SIDE-L P.C.B.)		(RTL)
B6101	ML-621S/F9D	BATTERY	1	
FP6101	K1MN16BA0028	CONNECTOR 16P	1	
FP6102	K1MN14BA0197	CONNECTOR 14P	1	
R6101	ERJ6GEYJ102V	M.RESISTOR CH 1/10W 1K	1	
##	09	VEP08348A (MONITOR P.C.B)		(RTL)
C901	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
C902	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
C903	F1J1A475A023	C.CAPACITOR CH 10V 4.7U	1	
C906	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C907	ECJ1VB1A105K	C.CAPACITOR CH 10V 1U	1	
C908	F1J1A2250007	C.CAPACITOR CH 10V 2.2U	1	
C913	ECJ0EC1H390J	C.CAPACITOR CH 50V 39P	1	
C914	ECJ0EC1H390J	C.CAPACITOR CH 50V 39P	1	
C915	ECJ0EC1H390J	C.CAPACITOR CH 50V 39P	1	
C918	F1J1A475A023	C.CAPACITOR CH 10V 4.7U	1	
C933	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
D902	B0BC6R100025	DIODE	1	
D905	B3AFB0000117	DIODE	1	
D906	B3AFB0000117	DIODE	1	
D907	B3AFB0000117	DIODE	1	
D908	B3AFB0000117	DIODE	1	
D909	B3AFB0000117	DIODE	1	
D910	B3AFB0000117	DIODE	1	
EP901	VMC1897	EARTH PLATE	1	
FP901	K1MN24BA0055	CONNECTOR 24P	1	
FP902	K1MN23BA0132	CONNECTOR 23P	1	
L901	G1C101KA0055	CHIP INDUCTOR 100UH	1	
Q901	2SA2174J0L	TRANSISTOR	1	
Q902	2SC6054J0L	TRANSISTOR	1	
Q903	2SC6054J0L	TRANSISTOR	1	
Q904	2SC6054J0L	TRANSISTOR	1	
Q905	2SA2174J0L	TRANSISTOR	1	
Q906	2SC6054J0L	TRANSISTOR	1	
Q907	2SC6054J0L	TRANSISTOR	1	
Q908	2SC6054J0L	TRANSISTOR	1	
Q913	2SA2174J0L	TRANSISTOR	1	
R901	ERJ3RBD122	M.RESISTOR CH 1/16W 1.2K	1	
R902	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	1	D0GBR00JA017
R903	ERJ3RBD182	M.RESISTOR CH 1/16W 1.8K	1	
R904	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R906	ERJ3RBD563	M.RESISTOR CH 1/16W 56K	1	ERJ3RBD563V
R907	ERJ3RBD271	M.RESISTOR CH 1/16W 270	1	
R908	ERJ3RBD271	M.RESISTOR CH 1/16W 270	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R909	ERJ3RBD271	M.RESISTOR CH 1/16W 270	1	
R910	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R912	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R913	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R915	D0GB102JA057	M.RESISTOR CH 1/10W 1K	1	
R918	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R924	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R925	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R926	ERJ3GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R927	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
R930	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R931	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R932	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R933	ERJ3RED270	M.RESISTOR CH 1/16W 27	1	
R934	ERJ3GEY0R00	M.RESISTOR CH 1/10W 0	1	
R937	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R940	D0GB103JA057	M.RESISTOR CH 1/10W 10K	1	
R941	D0GB473JA057	M.RESISTOR CH 1/10W 47K	1	
##	10	VEK0H35 (CCD FPC)		
C201	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C202	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
C203	F1G1C104A080	C.CAPACITOR CH 16V 0.1U	1	
C205	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C206	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
C211	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C212	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
C213	F1G1C104A080	C.CAPACITOR CH 16V 0.1U	1	
C215	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C216	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
C221	ECJ0EB1A104K	C.CAPACITOR CH 10V 0.1U	1	
C222	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
C223	F1G1C104A080	C.CAPACITOR CH 16V 0.1U	1	
C225	F1G0J105A001	C.CAPACITOR CH 6.3V 1U	1	
C226	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	
Q201	2SC4627JCL	TRANSISTOR	1	
Q202	2SC4627JCL	TRANSISTOR	1	
Q211	2SC4627JCL	TRANSISTOR	1	
Q212	2SC4627JCL	TRANSISTOR	1	
Q221	2SC4627JCL	TRANSISTOR	1	
Q222	2SC4627JCL	TRANSISTOR	1	
R201	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R202	ERJ2GEJ821	M.RESISTOR CH 1/16W 820	1	
R203	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R204	ERJ2GEJ821	M.RESISTOR CH 1/16W 820	1	
R205	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R206	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R208	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R211	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R212	ERJ2GEJ821	M.RESISTOR CH 1/16W 820	1	
R213	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R214	ERJ2GEJ821	M.RESISTOR CH 1/16W 820	1	
R215	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R216	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R218	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	
R221	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R222	ERJ2GEJ821	M.RESISTOR CH 1/16W 820	1	
R223	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R224	ERJ2GEJ821	M.RESISTOR CH 1/16W 820	1	
R225	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R226	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R228	D0YAR0000007	M.RESISTOR CH 1/16W 0	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VYK1T36	SIDE CASE (R) 3U	1	
2	VGL1163	SD PANEL LIGHT	1	
3	VGQ8659	KNOB HOLDER	1	
4	VGU9890	MODE CHANGE KNOB	1	
5	VGQ8660	SD DOOR HOLDER	1	
6	VKF4051	SD DOOR	1	
7	VSC5777	SD EARTH PLATE	1	
8	VMP8490	SR HEAT SINK	1	
9	VEP001L1A	SIDE-R P.C.B.	1	(RTL)
10	VEP001L2A	LCD DET P.C.B.	1	(RTL)
11	VGQ6816	SHEET	1	
12	VEP001L5A	OPERATION (R) P.C.B.	1	(RTL)
13	VEP001L4A	SIDE-R FPC UNIT	1	
14	VGQ8661	TRIPOD SHEET	1	
15	VGQ8809	SHEET	1	
16	VMP8489	HINGE SUPPORT PLATE	1	
17	VMP8580	SR HEAT SINK (B)	1	
18	VGQ8667	LCD MAINTENANCE PIECE	1	
19	L5BDDXH00025	LCD PANEL	1	
20	VGL1144	EVF DEFFUSION SHEET	1	
21	VGL1145	BL PRISM PANEL	1	
22	VGQ8346	LCD PIECE	1	
23	VGQ7102	BL PIECE	1	
24	VGQ8666	PRISM HOLD PIECE	1	
25	VGL1136	LENS PANEL	1	
26	VEP29169A	EVF P.C.B.	1	(RTL)
27	VYK1T15	EVF UNIT	1	
32	VGQ7249	SLIDE SPACER	1	
33	VGQ7249	SLIDE SPACER	1	
34	VGQ8665	EVF SUPPORT PIECE	1	
35	VEP29170A	EVF FPC	1	
36	VGQ8668	SLIDE CASE HOLDER	1	
37	VMP8491	EVF FRAME	1	
38	VMC1982	EVF CLICK SPRING	1	
39	VMP8492	SHOE ANGLE	1	
40	VKM6865	FRONT CASE-3	1	NV-GS300EG/EB/EP/E/PL
				NV-GS280EB/EG/EP/E
40	VKM6829	FRONT CASE-3	1	NV-GS300EE/GC/GN/SG/GD/GT/GCT
				NV-GS308GK
41	VKW3297	SENSOR WINDOW	1	
42	VGL1168	TALLY PANEL LIGHT	1	
43	VKF4052	JACK COVER-2	1	
44	VMP8496	FRONT ANGLE	1	
45	VGK3182	LENS ORNAMENT	1	
46	N9ZZ00000326	BARRIER MOTOR UNIT	1	
47	VDW1241	FRONT FRAME	1	
48	VMG1705	LENS DAMPER RUBBER	1	
49	VML3925-1	BARRIER SELECT KNOB	1	
50	VGQ8673	MIC ADDNET-1	1	
51	VGQ8674	MIC NET	1	
52	VYK1T18	LENS HOOD UNIT	1	
56	VEP04899A	FRONT P.C.B.	1	(RTL)
56-1	VGQ8672	CONDENSER HOLDER-2	1	
56-2	VMP8493	MIC ANGLE A	1	
56-3	VMP8547	MIC ANGLE B	1	
56-4	VEP04900A	ECM FPC UNIT	1	
56-5	EFN-MVV34ZC	FLASH UNIT	1	
56-6	VGQ8828	FLASH SHADING PIECE	1	
57	VSC5810	MOTOR EARTH PLATE	1	
58	VWJ1807	FRONT FPC	1	
B1	VHD1821	SCREW	1	
B2	VHD1384	SCREW	1	
B3	VHD1384	SCREW	1	
B4	XQN16+B3FN	SCREW	1	
B5	XQN16+B3FN	SCREW	1	
B6	XQN16+B3FN	SCREW	1	
B7	XQN16+BJ6FN	SCREW	1	
B8	XQN16+BJ6FN	SCREW	1	
B9	VHD1411	SCREW	1	
B10	VHD1411	SCREW	1	
B11	VHD1822	SCREW	1	
B12	VHD1822	SCREW	1	
B13	VHD1444	SCREW	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
B14	VHD1444	SCREW	1	
B15	XQS2+A3FN	SCREW	1	
B16	XQN16+BJ6FN	SCREW	1	
B17	XQN16+BJ4FN	SCREW	1	
B18	XQN16+BJ4FN	SCREW	1	
B19	XQN16+BJ6FN	SCREW	1	
B20	XQN16+BJ6FN	SCREW	1	NV-GS300EE/GC/GN/SG/GD/GT/GCT
				NV-GS308GK
B21	XQN16+BJ6FN	SCREW	1	NV-GS300EE/GC/GN/SG/GD/GT/GCT
				NV-GS308GK
B22	XQN16+BJ4FN	SCREW	1	
B23	XQN16+BJ4FN	SCREW	1	
B24	XQN16+BJ6FN	SCREW	1	
B25	XQN16+B4FN	SCREW	1	
B26	XQN16+B3FN	SCREW	1	
B27	XQN16+B3FN	SCREW	1	
B28	XQN16+B3FN	SCREW	1	
B29	XQN16+BJ6FN	SCREW	1	
B30	XQS2+A3FN	SCREW	1	
B31	XQS2+A3FN	SCREW	1	
B32	XQN16+BJ4FN	SCREW	1	
B33	XQN16+B5FN	SCREW	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
101	N9ZZ00000322	GRIP OPERATING UNIT	1	
102	VML3927	CASETTE LOCK LEVER	1	
103	VMB3856	CASSETTE LOCK SPRING	1	
104	VGK3197	CASETTE COVER ORNAMENT	1	
105	VEP001L3A	SIDE-L P.C.B.	1	(RTL)
106	VGQ5908	SPEAKER SHEET	1	
107	VGU9905	BATTERY LOCK KNOB	1	
108	VGQ8735	BATTERY LOCK PIECE	1	
109	VMB3602	BATTERY LOCK SPRING	1	
110	VMP8486	REAR HEAT SINK	1	
111	VKM6824	REAR CASE	1	
112	VYC0938	GRIP BELT(U)	1	
114	VEK0J51	BATTERY FPC UNIT	1	
115	VKM6830	SIDE CASE(L)	1	
116	VKF4050	MECHANISM ADJ. COVER	1	
117	VMP8487	BELT PLATE -1	1	
118	VKM6825	TOP CASE	1	
119	VMP8488	LENS FRAME	1	
120	VGQ8879	FRONT BARRIER	1	
121	VSC5761	CCD HEAT SINK PLATE	1	
122	VGQ8455	CAPSTAN FPC SHEET	1	
123	VEP03G87B	MAIN P.C.B.	1	(RTL) NV-GS300EG/EB/EP/E
123	VEP03G87C	MAIN P.C.B.	1	(RTL) NV-GS300EE/GC/GN/SG
123	VEP03G87T	MAIN P.C.B.	1	(RTL) NV-GS300GCT
123	VEP03G87S	MAIN P.C.B.	1	(RTL) NV-GS300PL
123	VEP03G87F	MAIN P.C.B.	1	(RTL) NV-GS300GD
123	VEP03G87G	MAIN P.C.B.	1	(RTL) NV-GS300GT
123	VEP03G87D	MAIN P.C.B.	1	(RTL) NV-GS308GK
123	VEP03G87H	MAIN P.C.B.	1	(RTL) NV-GS280EB/EG/EP/E
124	VEP23645B	SUB P.C.B.	1	(RTL) NV-GS300EG/EB/EP/
				EE/E/GC/GN/SG/GCT
				NV-GS308GK
				NV-GS280EB/EG/EP/E
124	VEP23645C	SUB P.C.B.	1	(RTL) NV-GS300PL/GD/GT
125	VYK1S65	MECHA FRAME UNIT	1	
B101	XQN16+BJ4FN	SCREW	1	
B102	XQN16+B2FN	SCREW	1	
B103	XQN16+B2FN	SCREW	1	
B104	XQN16+BJ4FN	SCREW	1	
B105	XQN16+BJ4FN	SCREW	1	
B106	XQN16+BJ4FN	SCREW	1	
B107	XQN16+BJ4FN	SCREW	1	
B108	VHD1658	SCREW	1	
B109	XQN16+B3FN	SCREW	1	
B110	XQN16+B3FN	SCREW	1	
B111	XQN16+B35FN	SCREW	1	
B112	XQN16+BJ6FN	SCREW	1	
B113	VHD1831	SCREW	1	
B115	VHD1133	SCREW	1	
B116	VHD1133	SCREW	1	
B117	VHD1133	SCREW	1	
B118	XQN16+B3FN	SCREW	1	
B119	XQN16+B3FN	SCREW	1	
B120	XQN16+B5FN	SCREW	1	
B121	XQN16+B5FN	SCREW	1	
B123	XQN16+BJ4FN	SCREW	1	
B124	XQN16+BJ4FN	SCREW	1	
B125	XQN16+BJ4FN	SCREW	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
201	VYK1T47	LCD CASE (T) UNIT	1	NV-GS300EG/EB/EP/E
201	VYK1T56	LCD CASE (T) UNIT	1	NV-GS300EE
201	VYK1T48	LCD CASE (T) UNIT	1	NV-GS300GC/GN/SG
201	VYK1V72	LCD CASE (T) UNIT	1	NV-GS300GCT
201	VYK1U65	LCD CASE (T) UNIT	1	NV-GS300PL
201	VYK1T45	LCD CASE (T) UNIT	1	NV-GS300GD
201	VYK1T46	LCD CASE (T) UNIT	1	NV-GS300GT
201	VYK1T49	LCD CASE (T) UNIT	1	NV-GS308GK
201	VYK1T50	LCD CASE (T) UNIT	1	NV-GS280EB/EG/EP/E
202	VKM6827	LCD CASE (B)	1	
203	VSC5773	LCD SHIELD CASE	1	
204	L5BDDYH00023	LCD (MONITOR)	1	
205	VGQ8662	HOLDER	1	
206	VGL1165	PRISM SHEET A	1	
207	VGL1166	PRISM SHEET B	1	
208	VGL1164	DIFFUSION SHEET	1	
209	VKW3296	LIGHTING PLATE	1	
210	VGL1167	REFLECTION SHEET	1	
211	VEP08348A	MONITOR P.C.B.	1	(RTL)
212	VXD0457	LCD HINGE(1)U	1	
213	VGQ8734	HINGE COVER(B)	1	
214	VGQ8664	HINGE COVER (T)	1	
215	VSC5774	LCD GROUND PLATE	1	
B201	VHD1680	SCREW	1	
B202	VHD1680	SCREW	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
301	VXQ1386	PRISM UNIT	1	
301-1	VEK0H35	CCD FPC	1	
302	VDL1748	OPTICAL FILTER	1	
304	VXW0767	LENS UNIT	1	
304-1	VXQ1368	1ST LENS FRAME MOVE UNIT	1	
304-2	VXP2530	2ND LENS FRAME MOVE UNIT	1	
304-3	VXP2538	IRIS UNIT	1	
304-5	VXP2531	4TH LENS FRAME MOVE UNIT	1	
304-6	VMS7638	GUIDE POLE	1	
304-7	VMS7638	GUIDE POLE	1	
304-8	VDW1213	MASTER FLANGE	1	
304-9	L6HA64NC0003	ZOOM MOTOR UNIT	1	
304-10	L6HA64NC0004	FOCUS MOTOR UNIT	1	
304-13	VXQ1369	OIS UNIT	1	
B301	XQN16+CJ5FJ	SCREW	1	
B302	XQN16+CJ5FJ	SCREW	1	
B303	XQN16+CJ7FJ	SCREW	1	
B304	XQN16+CJ7FJ	SCREW	1	
B305	XQN16+CJ7FJ	SCREW	1	
B306	XQN16+CJ5FJ	SCREW	1	
B307	XQN16+CJ5FJ	SCREW	1	
B308	XQN16+CJ5FJ	SCREW	1	
B309	XQN16+CJ5FJ	SCREW	1	
B310	XQN16+CJ5FJ	SCREW	1	
B311	XQN16+CJ5FJ	SCREW	1	
B312	XQN16+CJ5FJ	SCREW	1	
B313	XQN16+CJ5FJ	SCREW	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
501	VXA8276	MECHA CHASSIS	1	
501-1	VXA8198	CASETTE UP UNIT	1	
501-1-1	VMB3766	CASSETTE UP SPRING	1	
501-2	VXR0403	T REEL MOTOR	1	
502	VEG1663	CYLINDER UNIT	1	
B501	VHD1632	SCREW	1	
B502	VHD1757	SCREW	1	
B503	VHD1757	SCREW	1	
B504	VHD1757	SCREW	1	
B505	VHD1754	SCREW	1	
B506	VHD1754	SCREW	1	
B507	VHD1753	SCREW	1	

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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
401	VPG1E96	PACKING CASE	1	NV-GS300EG/EB/EP/EE/E/
				GC/GN/SG/PL/GD/GT/GCT
401	VPG1E97	PACKING CASE	1	NV-GS308GK
401	VPG1F65	PACKING CASE	1	NV-GS280EB/EG/EP/E
402	VPN6366	CUSHION	1	
403	VPK3066	ACCESSORIES BOX	1	
405	K2GJ2DZ00018	DC CABLE	1	
406	K2KZ9CB00001	AV CABLE	1	
⚠ 407	K2CQ2CA00006	AC CABLE	1	NV-GS300EG/EP/EE/E/GC/SG
				NV-GS280EG/EP/E
⚠ 407	RJA0053-3X	AC CABLE	1	NV-GS300EB/GC/SG/GCT
				NV-GS280EB
⚠ 407	K2CJ2DA00008	AC CABLE	1	NV-GS300GN
⚠ 407	K2CA2CA00029	AC CABLE	1	NV-GS300PL
⚠ 407	RJA0078-1X	AC CABLE	1	NV-GS300GD
⚠ 407	K2CA2CA00027	AC CABLE	1	NV-GS300GT
⚠ 407	K2CA2CA00020	AC CABLE	1	NV-GS308GK
408	N2QAEC000017	REMOTE CONTROLLER	1	
409	VFC3506-1A	SHOULDER BELT	1	
410	N2QCAD000007	REMOTE CONTROL UNITS	1	NV-GS300EE/GC/GN/SG/
				GD/GT/GCT
				NV-GS308GK
411	VFA0453	USB CABLE	1	
⚠ 412	VQT0T10	OPERATING INSTRUCTION	1	NV-GS300EG
		(GERMAN/ITALIAN)		NV-GS280EG
⚠ 412	VQT0T11	OPERATING INSTRUCTION	1	NV-GS300EG
		(FRENCH/DUTCH)		NV-GS280EG
⚠ 412	VQT0T19	OPERATING INSTRUCTION	1	NV-GS300EB
		(ENGLISH)		NV-GS280EB
⚠ 412	VQT0T16	OPERATING INSTRUCTION	1	NV-GS300EP
		(ENGLISH/POLISH)		NV-GS280EP
⚠ 412	VQT0T17	OPERATING INSTRUCTION	1	NV-GS300EP
		(CZECH/HUNGARIAN)		NV-GS280EP
⚠ 412	VQT0T26	OPERATING INSTRUCTION	1	NV-GS300EE
		(UKRAINIAN/RUSSIAN)		
⚠ 412	VQT0T13	OPERATING INSTRUCTION	1	NV-GS300E
		(PORTUGUESE/SPANISH)		NV-GS280E
⚠ 412	VQT0T14	OPERATING INSTRUCTION	1	NV-GS300E
		(SWEDISH/DANISH)		NV-GS280E
⚠ 412	VQT0T21	OPERATING INSTRUCTION	1	NV-GS300GC/SG
		(CHINESE/ENGLISH)		
⚠ 412	VQT0T22	OPERATING INSTRUCTION	1	NV-GS300GC/SG
		(PERSIAN/ARABIC)		
⚠ 412	VQT0W28	OPERATING INSTRUCTION	1	NV-GS300GCT
		(ENGLISH)		
⚠ 412	VQT0W29	OPERATING INSTRUCTION	1	NV-GS300GCT
		(THAI/HINDI)		
⚠ 412	VQT0T29	OPERATING INSTRUCTION	1	NV-GS300GN
		(ENGLISH)		
⚠ 412	VQT0V32	OPERATING INSTRUCTIONS	1	NV-GS300PL
		(ENGLISH/SPANISH)		
⚠ 412	VQT0T07	OPERATING INSTRUCTION	1	NV-GS300GD
		(KOREAN)		
⚠ 412	VQT0T08	OPERATING INSTRUCTION	1	NV-GS300GT
		(CHINESE)		
⚠ 412	VQT0T30	OPERATING INSTRUCTION	1	NV-GS308GK
		(CHINESE)		
413	VQT0T12	O/I CD-ROM	1	NV-GS300EG
		(GE/FR/IT/DU)		NV-GS280EG
413	VQT0T20	O/I CD-ROM	1	NV-GS300EB/GN
		(EN)		NV-GS280EB
413	VQT0T18	O/I CD-ROM	1	NV-GS300EP
		(EN/PO/CZ/HU)		NV-GS280EP
413	VQT0T27	O/I CD-ROM	1	NV-GS300EE
		(RU/UR)		
413	VQT0T15	O/I CD-ROM	1	NV-GS300E
		(PR/SP/SW/DA)		NV-GS280E
413	VQT0T23	O/I CD-ROM	1	NV-GS300GC/SG
		(CO/EN/PE/AR)		
413	VQT0W30	O/I CD-ROM	1	NV-GS300GCT
		(EN/TA/HD)		
413	VQT0V33	O/I CD-ROM	1	NV-GS300PL
		(EN/SP)		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
413	VQT0T09	O/I CD-ROM	1	NV-GS300GT
		(CO)		
413	VQT0T31	O/I CD-ROM	1	NV-GS308GK
		(CN)		
⚠ 414	VSK0651B	AC ADAPTOR	1	NV-GS300EG/EB/EP/EE/E/
				GC/GN/SG/PL/GCT
				NV-GS280EB/EG/EP/E
⚠ 414	VSK0652A	AC ADAPTOR	1	NV-GS300GD
⚠ 414	VSK0679	AC ADAPTOR	1	NV-GS300GT
⚠ 414	VSK0651A	AC ADAPTOR	1	NV-GS308GK
415	VFF0305-S	CD-ROM	1	See "Notes"

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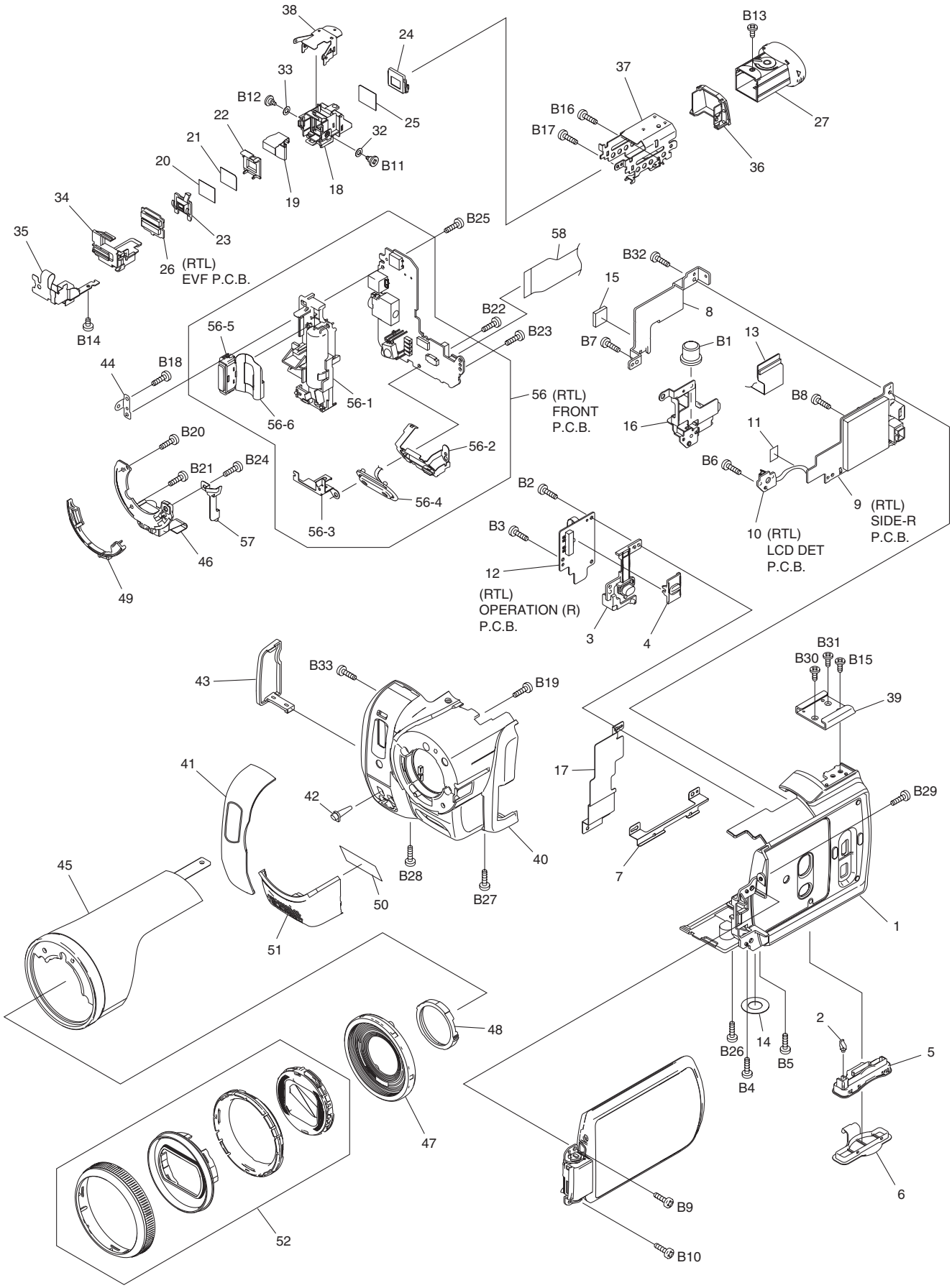
S7. Exploded View

S7.1. Frame and Casing Section (1)



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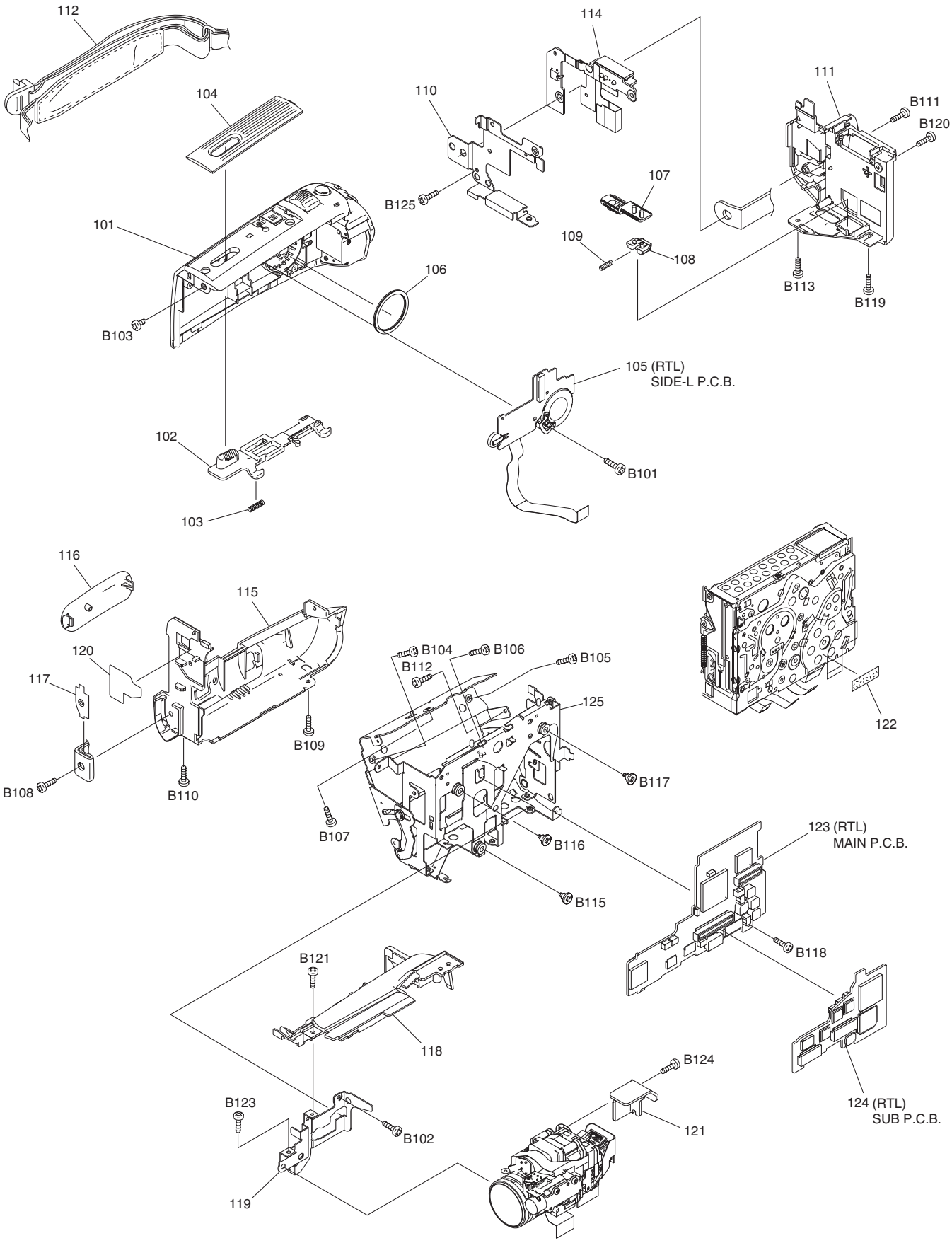
S7.2. Frame and Casing Section (2)



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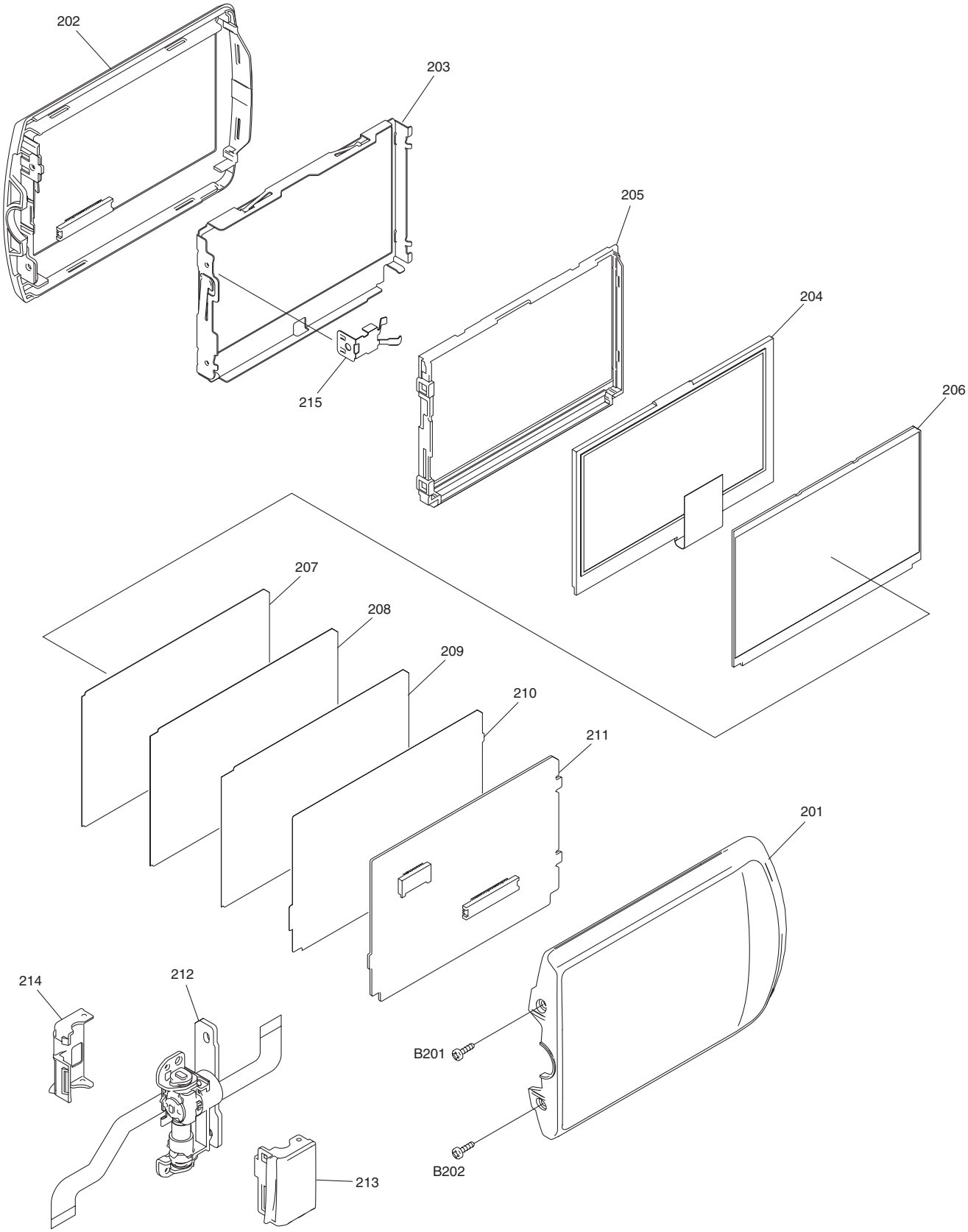
S7.3. LCD Section



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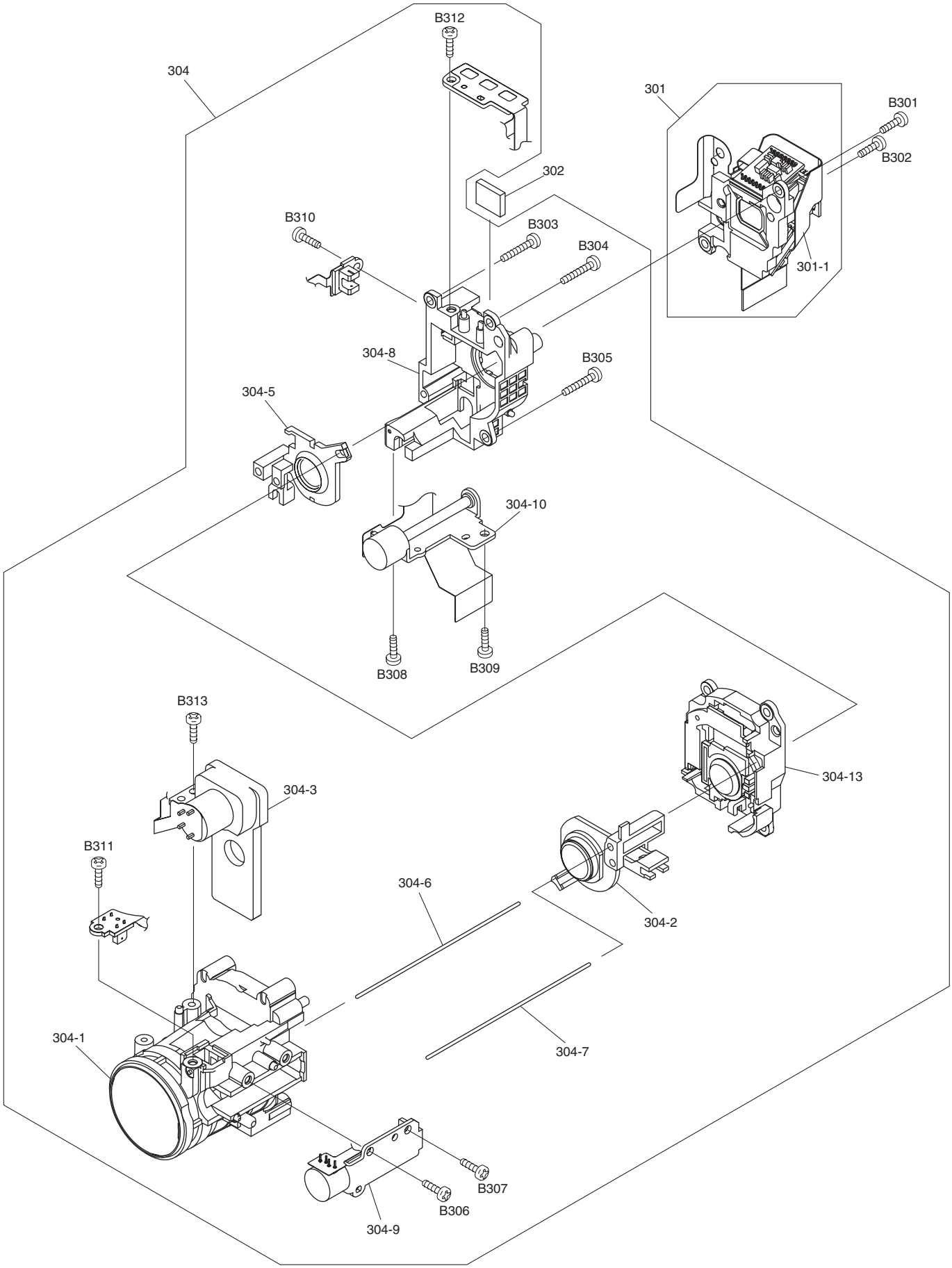
S7.4. Camera Lens Section



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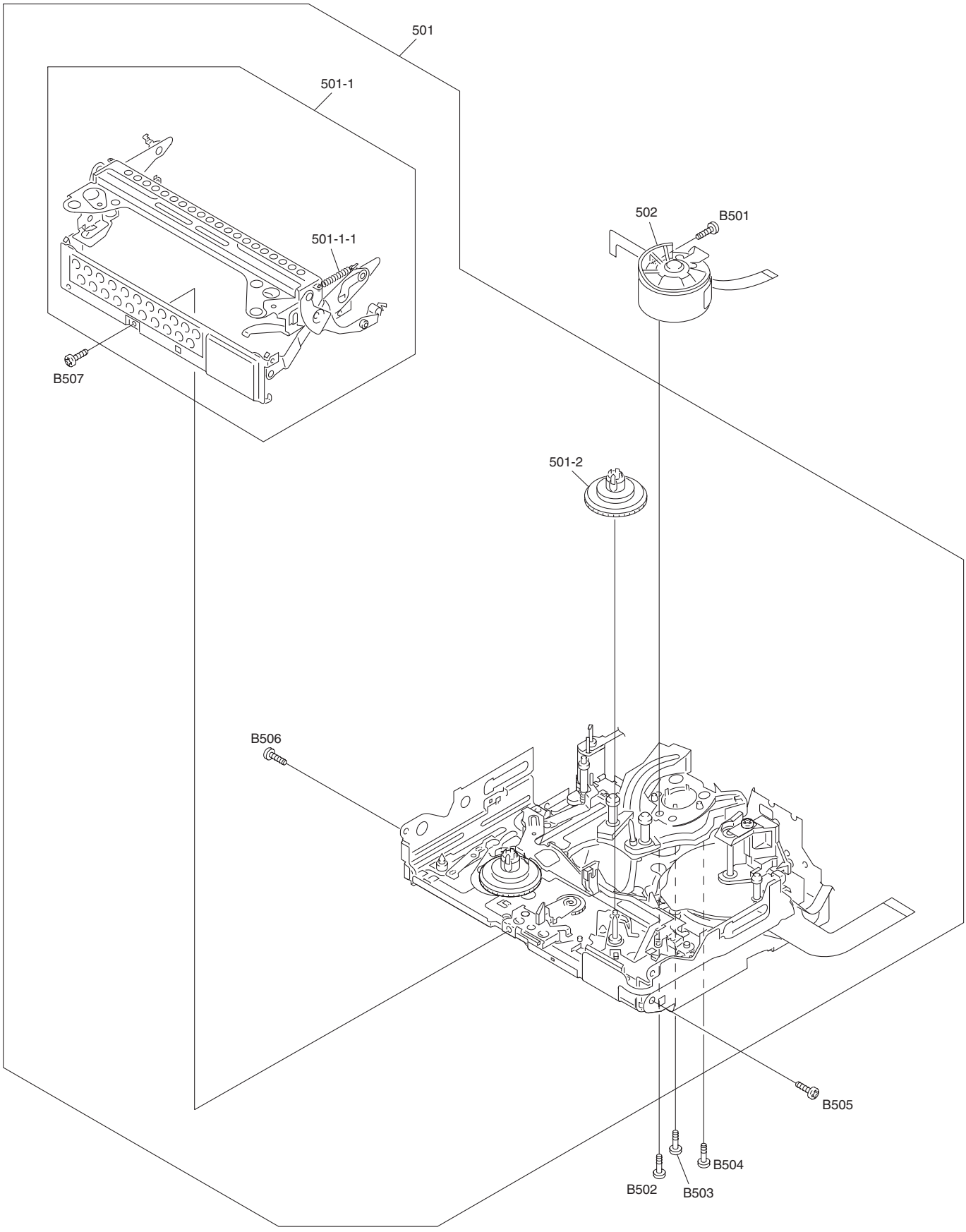
S7.5. Video Mechanism Section



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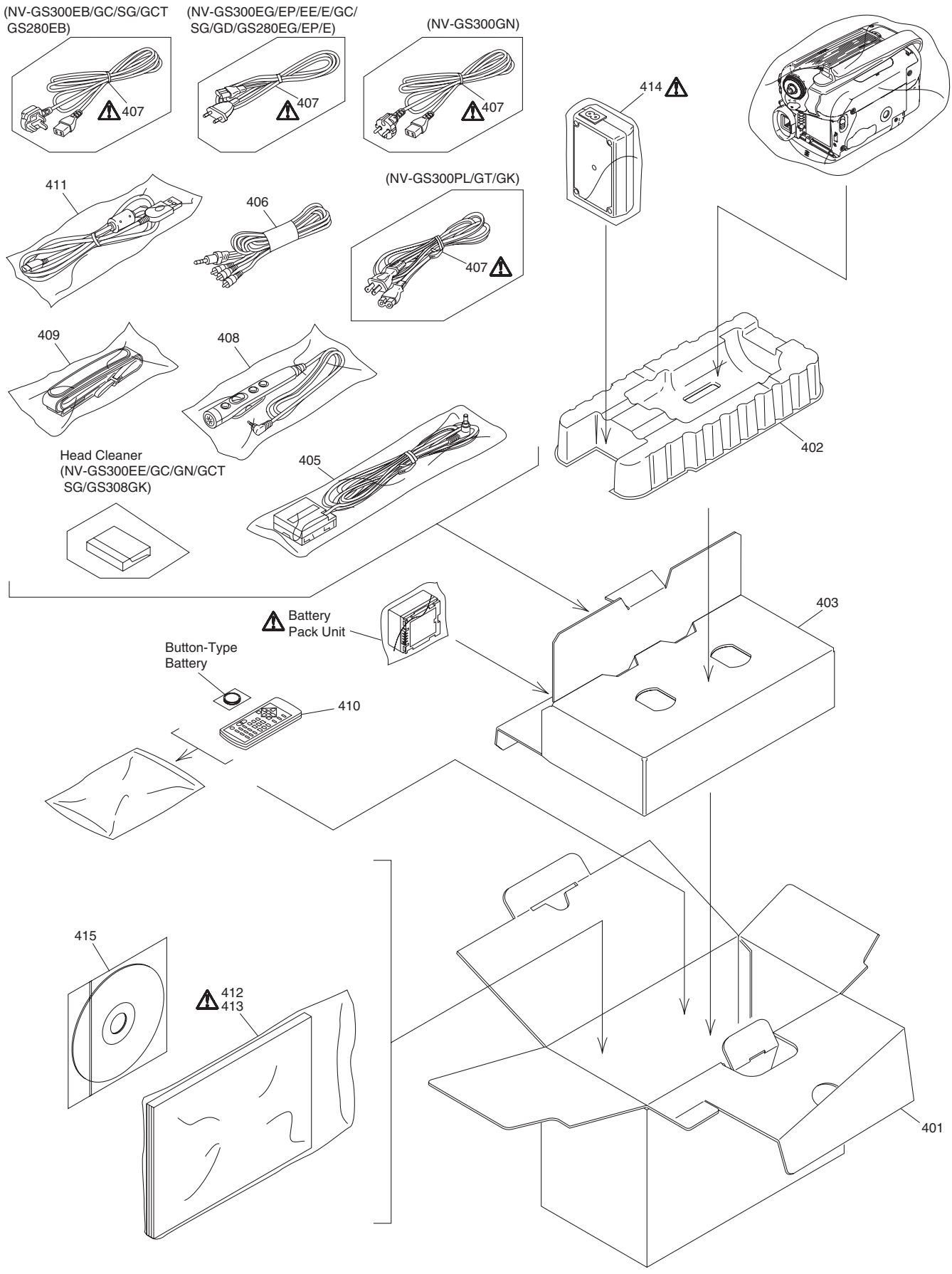
S7.6. Packing Parts and Accessories Section



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